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The need for objective evaluation of the social and emotional adjustment of elementary school children has become increasingly acute, yet few tools are available which can provide data on the epidemiology of psychopathology in the school-age child. The present study undertook to cross-validate a behavior checklist for boys, the Pittsburgh Adjustment Survey Scales (PASS) which, prior to this study, could only be used to enable teachers to rate the emotional and social adjustment of boys between the ages of six and 12. A scale was also added to measure academic disability. The purposes of this research were: (1) to replicate the factorial structure of PASS, (2) to determine if academic disability is an independent factor, (3) to determine if factor structures differ between males and females, and (4) to provide general population norms for both males and females. PASS did not cross-validate in this study, nor were factor structures replicated. The differences are discussed at length. (BP)

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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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PITTSBURGH ADJUSTMENT SURVEY SCALES: A CROSS VALIDATION AND NORMATIVE STUDY[1]

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The need for objective evaluation of the social and emotional adjustment of elementary school children has become increasingly acute. Scientific investigators need base line data for evaluating change occurring during maturation; educational administrators need reliable information for allocating funds for mental health services; community mental health planners need to know the frequency of various types of problems in specific geographical areas; and teachers, counselors, and psychological diagnosticians need objective information to evaluate a child's behavior for appropriate diagnosis and referral.

As yet, few tools are available which can provide data on the epidemiology of psychopathology in the school age child. Little is known about the frequency of various types of disturbances in the general population, or about the natural history of these disturbances. Problems exist, some are resolved as the child grows older, while others continue to develop into severe psychopathology. However, no standard methods for assessing childhood psychopathology are available

to determine if one child's behavior differs from that of another. Whether a child is referred or treated depends upon such chance factors as the attitude of the teacher, pediatrician, or parent towards emotional disturbances. A clear need exists for the development of objective procedures for the assessment of emotional disturbances in the school age child

In a recent publication, Ross, et al. (1965), reported a behavior check list for boys, the Pittsburgh Adjustment Survey Scales (PASS). The Scales were developed to enable teachers to rate the emotional and social adjustment of elementary school boys between 6 and 12 years of age. Four dimensions emerged which were converted into scales describing aggressive, passive-aggressive, withdrawal, and pro-social behavior. However, neither normative data nor information on females is provided in the Ross study. These deficiencies seriously hamper the usefulness of the scales in their present form.

Our study undertook to cross validate Ross' work and to provide normative data from a general urban population for both a male and a female sample. In addition, a scale to measure academic disability was added to the original battery. The purposes of the research were: (1) to replicate the factorial structure of the PASS; (2) to determine if academic disability is an independent factor from which a scale can

be constructed; (3) to determine if the factor structure for males differs from that of females; and (4) to provide general population norms for both the male and female populations, if the PASS cross validates.

Method

Pittsburgh Adjustment Survey Scales (PASS)

The PASS was developed by Ross, et al. (1965) to describe three dimensions of behavior: aggression, withdrawal, and pro-social. An extreme group procedure was employed to obtain item clarity and content homogeneity. By this method, an original pool of 140 items was reduced to 94. A random sample of protocols on 209 children from three consolidated school districts in Washington County, Pennsylvania, and Murfreesboro, Tennessee, was obtained. The sample represented a large socioeconomic range in both rural and urban settings and was almost equal in distribution from grades 1 -- 6. Each teacher rated one randomly-selected boy on a 3-point scale.

Product-moment correlations were computed among the 94 items and subjected to a principal components factor analysis with unity in the diagonals. Five factors were extracted and a normalized varimax procedure was used to rotate these five factors to simple structure. Four factors were interpretable and sufficiently stable for scale construction:

Aggression (25 items), Passive-Aggression (13 items), Withdrawal (19 items), and Pro-Social (20 items). Criterion for item assignment was based on a factor loading of .40 and above on the major factor, with low loadings on the remaining three factors. Seventeen items were unassigned because of low or ambiguous loadings.

Split-half and test-retest reliabilities were sufficiently high for each scale to be used for both clinical and research purposes, and none of the scales revealed any change related to grade level beyond that to be expected by chance. In addition, Ross included a small study which suggests that the scales have construct validity.

Modification of PASS for Standardization

The 77 items of the Ross scales were retained for cross-validation along with three others (Items 1, 82, 83) which originally did not load on any factor. All PASS statements were kept in their original order with 14 Learning Disability items being substituted for those unassigned in the PASS. Two Anxiety items were included as numbers 95 and 96, and all were presented in a "yes"-"No" format. The statements used in this questionnaire constitute a modified PASS which we will refer to as the School Behavior Check List (SBCL).

A four-page booklet was prepared for teacher ratings (Appendix A). The booklet was divided into four sections:

A. Demographic: Age, sex, race, religion, grade,

type of school (city, county, parochial, or private), I. Q., father's highest education level and estimated income, and the rater's years of teaching experience.

B. Disability Information:

(1) I would rate this pupil as one of the best adjusted I have known in my teaching career. YES___ NO___

(2) I would rate this pupil as one of the most seriously disturbed I have known in my teaching career. YES___ NO___

(3) I think this child should be referred for treatment for an emotional problem. YES___ NO___

(4) This child has been or will in the near future be referred for treatment for an emotional problem. YES___ NO___

(5) I think this child should be referred for special education for a learning disability. YES___ NO___

(6) This child has been or will in the near future be referred for special education for a learning disability. YES___ NO___

C. Teacher Rating Scales: Five 9-point scales were prepared for teachers to evaluate each pupil.

Each scale had five verbally described marker points separated by undesignated intervals. Teachers were asked to rate the child at any point between one and nine: One indicated extreme pathology; nine indicated superior adjustment. The questions rated were as follows:

(1) How would you personally rate this pupil's intellectual ability: Below average = 1; Above average = 9.

(2) How would you rate this pupil's academic skills: Below expectancy = 1; Above expectancy = 9.

(3) How would you rate this pupil's overall academic performance: Below capacity = 1; Above capacity = 9.

(4) How would you rate this pupil's social and emotional adjustment: Very disturbed = 1; Well adjusted = 9.

(5) How would you rate this pupil's personal appeal: Very unappealing = 1; Very appealing = 9.

D. SBCL Items: SBCL is made up of 80 PASS, 14 Learning Disability, and 2 Anxiety Items. Since the Learning Disability items comprise a potentially new scale, they are as follows:

(Number shown is SBCL designation)

4. Penmanship (handwriting) at least one grade level below age expectation.
8. Poorly coordinated when doing things with his hands such as coloring or pencil work.
9. Reading ability at least one grade level below age expectation.
18. Fails to carry out tasks (Homework assignments, seat work, etc.)
36. Finds it hard to study.
40. His school performance is far below his capabilities.
42. Behind at least one school grade due to academic difficulties.
43. Seems dull; slow to catch on.
57. Distractible; can't concentrate.
60. Spelling performance at least one grade level below age expectation.
73. Average or above I. Q. (Intelligence Quotient).
91. Bright, but doesn't apply self (Under Achiever).
93. Behind at least two school grades due to academic difficulties.
94. Arithmetic skill at least one grade level below age expectation.

Sample

Each elementary school teacher[2] (N = 3,335) in the city, county, parochial, and private schools of Louisville and Jefferson County, Kentucky, was asked to select randomly one male and one female child from her class and rate them on the SBCL. Ratings were done three months after the opening of school, during the week of November 27, 1967. Instructions to principals and teachers concerning selection of subjects and testing had been distributed one month prior to the rating date. Teachers were asked to rate only those children whom they had known for at least two months. (See Appendix A).

Three-thousand and sixty-six teachers (92%) returned at least one SBCL to form the total sample pool (N = 6,131). To establish test-retest reliability, every fiftieth and fifty-first protocol was pulled to form a reliability pool of 123 teachers who were asked to re-rate their children one and one-half months (January 15, 1968) after the original ratings. Of this group, 91 (74%) returned their ratings. This loss of 26% may distort the true reliability estimates since our figures represent only those teachers willing to re-rate.

Examination of the protocols revealed that many teachers were contradicting themselves in their ratings. A contradictory index (see Appendix B) was established which ranged from 0 -- 11 possible contradictions. A sub-sample of 100, determined that the mean and standard

deviation for the contradictions were one. Using three standard deviations as an arbitrary criterion of teacher unreliability, all protocols which had three or more contradictions (N = 576, 9%) were pulled to form the standardization sample (SS)(M = 2,627, F = 2,746). All statistical computations, except test-retest reliability, were derived from this SS.

Random selection procedures were obtained from Ross, et al. (1965). Twenty different random selection sheets were prepared, each listing the numbers 5 -- 45 in Column A. (See Appendix A). Each number in Column A was accompanied by a number in Column B; the numbers in B having been randomly selected with the restriction that the number not exceed the magnitude of the number appearing in the same row in A. The teacher was to select the number in A which represented the number of boys in her class, and to note the corresponding number in B which was the rank order in the teacher's class roster of the boy to be rated. The same procedure was repeated to determine the female to be rated. The random selection procedure and the cooperation received from the school systems provided assurance that a sample representative of the total population of elementary school children within the County was obtained.

Statistical Analysis

Demographic

All demographic information[3] is reported in per cent per category and, where appropriate, in terms of means and standard deviations. A one-way analysis of variance for each scale on each demographic variable was computed to determine the effect of these variables.

Factor Analysis

Using raw scores, a factor analysis was computed on the male, female, and total populations. For each analysis, a 96 x 96 matrix[4] was intercorrelated using a product-moment correlation. The intercorrelation matrix was subjected to a principal components factor analysis with unity in the main diagonals and six factors extracted. Three independent normalized varimax rotations to simple structure were made on each population using 4, 5, and 6 factors, respectively. A second order factor analysis included demographic variables, teacher ratings, and SBCL Scales.

Scale Construction

Criterion for item assignment to scales was based on a factor loading of at least .32 with non-significant loadings on the remaining five factors. If an item loaded on two factors, the item was assigned either to the factor with the highest loading, or to both scales, if the item helped to clarify the meaning of the scales. This exception resulted

in 14 duplicate items. All items loading positively and checked "yes" on a scale were assigned a value of one, as were all negatively loading items checked "no." The mean and standard deviation of raw scores for each scale were computed.

Reliability

For each scale, split-half and test-retest reliabilities were computed. For the split-half, the SS was used; for the test-retest, the reliability sample was employed (N = 182).

Results

Standardization Sample (SS)

After rejecting 576 contradiction protocols and withdrawing 182 for test-retest reliability, 5,373 protocols remained for the SS. Complete information on all demographic variables was not available, but a sufficient N was obtained to describe the distribution of variables for the entire SS.

Table 1 indicates that there are 2.2% more girls than boys in this age group. Negroes comprise 19% of the sample.

Insert Table 1 about here

There is a fairly equal distribution for ages seven through eleven. The number of 6-year-olds is lower than expected, probably as a result of two factors: (1) only the city schools have public kindergartens, thus a small portion of the sample

was in this group; and (2) age was coded to the birth date nearest to November, 1967. In the first grade population, older children entering in September, 1967, were coded with the 7-year-olds, while the 6-year-olds did not have an equivalent number of older kindergarteners coded as six. The 12- and 13-year-old groups represent children who started school late or failed one or more grades. Therefore, the 5-, 12-, and 13-year-old groups are not representative of the general population.

Within the SS, was a group of 3,919 children who had been given some type of intelligence test which was recorded by the teacher on the standardization booklet. The slightly higher mean I. Q. is probably insignificant and indicates a normal distribution of intelligence, which is further evidence that the sample represents a general population. Knowledge of socioeconomic status is highly inferential and represents, in most instances, the teachers' estimate of fathers' school achievement and income. Nevertheless, Table 2 shows that our sample approximates the 1960 census tract. Teachers who rated

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Insert Table 2 about here

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the protocols had, on the average, 13.8 years of experience, with a standard deviation of 12.2 years. All experience levels are represented, from beginning teachers to those about to retire.

Since the data were randomly drawn and the demographic variables represented the general population, the findings of this study can be generalized to similar urban populations.

SBCL Factor Structure

The task of communicating the results of the factor analytic studies of the SBCL is simplified, because the factor structure in each population is identical (see Appendix C). Surprisingly, there were no differences in the factor loadings for the male and female populations. For this reason, only the factor loadings for the total SS are reported. Our task was further simplified when we found that rotating 4, 5, or 6 factors did not alter the findings in respect to cross-validating the PASS. Since six factors met the internal consistency and semantic homogeneity criterion described by Miller (1967a), we decided to retain all six factors for scale construction.

In the principal components analysis, the first factor extracted 21.3% of the variance, the second 9.5%, the third 4.6%, the fourth 2.6%, and the last two 2.3% each. Total variance accounted for by the six factors was 42.6%. The first five factors accounted for 40.3% of the variance, comparable to the original PASS study. Most variables loaded significantly on this first factor (77%), suggesting a major G Factor in teacher ratings. Rotation succeeded in distributing the variance more evenly across the first four factors: 11.7%, 14.4%, 6.0%, and 4.6%, respectively.

Table 3 gives the varimax rotations for the total population. Factor 1 is clearly the Ross Pro-Social Factor with the addition of new items from the Learning Disability Scale. These new additions help to clarify the factor and

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Insert Table 3 about here

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indicate that it is a bipolar "Task Avoidance-Need Achievement" factor. Low motivation, failure to master difficult tasks, and a defeatist attitude characterize the pathological pole opposite the Pro-Social items of Ross. Factor 2 is the Aggressive Factor of Ross' study with the addition of the Passive-Aggressive items which did not emerge as an independent factor. Factor 3 is the PASS Withdrawal Factor, but six items failed to load and seven new items emerged, changing the emphasis from Withdrawal to Anxiety. In effect, then, we failed to cross validate the PASS factors, although three of the factors could be identified.

Factor 4 is a clear Academic Disability Factor since it is composed of items indicating low intelligence and poor academic skills. As previously mentioned, items included in the Learning Disability scale which refer to attitudes and habits unfavorable to learning, such as lack of motivation, concentration, perseverance, and coordination, all load on Factor 1. Teachers seem to make a clear distinction between the dull and the disinterested child. Factor 5 probably has

too few items to warrant a scale, but the items closely approximate the well-known "schizoid character" with its implied pathogenic prognosis. Hostile Isolation does not appear to describe the same type of phenomena as the Ross Withdrawal Factor. Factor 6 did not emerge in the Ross study and appears to reflect an egocentric, "pushy" extrovert. Factor 6 is such a distinct personality type and the traits are so well known, to both the teaching and clinical professions, that the factor merits a scale.

In summary, three of the SBCL factors are roughly equivalent to three PASS factors, but the Ross Scales were not cross validated. The factor structure of teacher ratings of psychopathological behavior in males and females did not differ, permitting the construction of identical scales for both sexes.

SBCL Scales

Seven scales, based on the factor analysis of the total population, were constructed for the SBCL: Low Need Achievement (LNA; N = 28), Aggression (Agg; N = 36), Anxiety (Anx; N = 18), Academic Disability (A D; N = 8), Hostile Isolation (H I; N = 7), Extraversion (Ext; N = 12), and Total Disability (T D; N = 95). The Scales, with the exception of TD, appear in Table 4. The table gives the number of the item on the PASS Standardization Booklet, the frequency of each item per 100, and the loading on the major factor.

Insert Table 4 about here

Table 5 gives the split-half and test-retest reliabilities for each SBCL Scale. Both types of reliability provide essentially the same estimates of stability for each

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Insert Table 5 about here

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scale. All scales, except HI, appear to meet accepted standards of reliability, but in general the reliabilities are not comparable to those obtained by Ross, et al. (1965). Using the sample from which items were selected, Ross found reliabilities ranging in the low 90's, but from a new sample of 58 S's, reliabilities ranged in the high 70's and low 80's, which more closely approximated those of this study. In a general, non-trained, population of teacher raters, test-retest and split-half reliabilities for the scales will average in the low 80's.

Table 6 provides means, standard deviations, standard errors, and T score equivalents ($\bar{X} = 50$, $\sigma = 10$) of raw scores

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Insert Table 6 about here

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for the total population for the seven SBCL Scales. Except for Ext, all scales have the highly skewed distribution expected of pathogenic behaviors. For any given child, teachers observe and report few specific pathogenic behaviors. The mean number of LNA is 6.6, Agg is 4, Anx is 3, while the average number of AD and HI items per child is even smaller.

The mean Ext score of seven appears to be due to this scale containing both socially acceptable and unacceptable items. When all pathogenic behaviors are reported, the mean per child is 16, suggesting that the average child, although not high in respect to any particular problem, is seen to manifest a number of deviant behaviors.

A *t* test for sex was run for each scale and appears in Table 7. All scales are significantly different, except

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Insert Table 7 about here

Anx and HI. Boys are seen as less motivated academically, as being more aggressive and extraverted, and as having more academic disabilities. These differences suggest caution when using Table 6 for a specific individual. Appendix D provides norms for each sex as well as for the total population.

The definition of psychopathology should not be based exclusively on frequency, but such information can be quite useful for administrative purposes. Appendix E provides accumulative percentages for specific populations: Male, Female, Best Adjusted, Moderately Adjusted, Worst Adjusted, Referred for Emotional Problem, and Referred for Special Education. Categories were based on teacher disability ratings (Section B, PASS Standardization Booklet, see Appendix A). Moderately Adjusted refers to all children checked

neither best nor worst adjusted. Since the distribution of raw scores is skewed for each population, we cannot project T score percentiles. However, access to Appendix E permits such a transformation. For example, 95% of the Best Adjusted children have TD scores of 50 or less, while only 1% of the Most Disturbed children have TD scores less than 50. Clearly, SBCL scores distinguish between the teacher's concept of well adjusted and poorly adjusted children. From Appendix E, one can also see that teachers are more prone to refer children manifesting aggression and anxiety. Taking 25% as a criterion, teachers suggest referral of children with a T score of 50 for Agg and 53 for Anx, while a score of 60 is necessary for LNA. Teachers apparently feel that the low motivated child is their responsibility, while the aggressive and anxious child is the province of the mental health worker.

Demographic Variable Effect

Behavior ratings are known to be influenced by demographic variables. Table 8 shows the relation of seven variables to SBCL Scales. The sample size of this study almost assures that any variation will be significant, hence, most variables

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Insert Table 8 about here

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show some effect. However, a very sizable effect is contributed by race, I. Q., and socioeconomic status (SES), while age, religion, grade, and teacher experience have a much less

(although in some instances, a significant) effect on the scales. In every instance the effect is in previously reported directions; i.e. increase in deviant behavior is associated with Negroes, low intelligence, and lower socioeconomic status.

Table 9 gives the means and standard deviations for five scales for sex, race, and SES. Except for Anx, both means and standard deviations are higher for males than for females. The same pattern exists for race except that mean differences are not as great. The greatest differences lie in SES where every scale shows a progressive decrease in pathology as social class goes up.

Table 10 gives I. Q. means and variances for the same scales. The inverse relationship between I. Q. and behavioral

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Insert Table 10 about here

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disorders is even more striking than that between pathology and SES. For each scale, deviant behavior decreases as I. Q. increases. The largest differences are quite naturally in the cognitive areas, but Anx has a 1½ σ and Agg a 1 σ spread between the lowest and highest levels of intelligence. Furthermore, most scales in the general population reach their mean deviant level when I. Q. level decreases to 90. As far as teachers are concerned, a strong inverse relationship exists between intelligence and deviant behavior, and, further,

most problems begin to accelerate when I. Q. drops to 90.

A two-way analysis of variance for each scale for race and I. Q. indicated that I. Q. was the primary variable for LNA, AD, and TD, while race and I. Q., contributed equally to Agg and Anx. Only on HI was race the primary variable. No interactions were found. The primary factor, then, for low motivation, poor academic performance, and over-all deviant behavior is low I. Q., while racial and intellectual factors, together, account for aggressive and anxious behaviors.

Second Order Factoring

Several aspects of the data point to a strong general factor in SBCL ratings. In view of the controversy among factor theorists (Miller, 1967b) concerning the number of factors required to describe personality ratings, a second order factoring of demographic, teacher ratings, and SBCL Scales was undertaken. Table 11 gives the intercorrelation

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Insert Table 11 about here

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matrix and Table 12 gives the factor analysis. All variables

Insert Table 12 about here

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have been explained previously except SBCL Adjustment. Children rated worst adjusted were given a score of three and those rated best, a score of one. All other children were given a score of two.

Because of the large sample it is possible to demonstrate significant relationships between demographic variables and teacher ratings. Many of these low, but significant, correlations have considerable theoretical import but cast little light on the basic behavioral dimensions. The second order factor analysis, on the other hand, indicates that there is a strong general bipolar factor governing teacher ratings and that the factor is related to I. Q. and SES in the demographic group. This general factor is clearly a high achievement bipolar dimension encompassing both cognitive and social skills. All teacher ratings and SBCL scales load on this factor, with TD scale having the highest loading of .94. Two other factors emerge, a cognitive-race factor and an age-grade factor, neither of which is related to the behavioral scales.

This second order factoring strongly suggests that teachers are rating along a single dimension, namely the ability of the child to perform adequately in the classroom. Teacher observations of pathological behavior apparently occur when such behaviors interfere with competent classroom performance. The extent to which psychopathology is independent of the achievement dimension will have to be ascertained from indices other than teacher ratings. Such techniques as diagnostic interviews with parents and children, psychological tests, peer ratings, situational tests, and psychophysiological

measures will need to be employed to determine the extent to which the LNA factor represents a general psychopathological factor or simply a teacher rating factor.

Discussion

Generally, there are three recognized criteria for factor replication: per cent of variance extracted for each factor, placement of marker variables, and factor content. In this project, the per cent of variance contributed by each factor was almost identical to the Ross study, and marker variables clearly identified three of the four Ross factors. However, item placement changed the content of each factor so that SBCL factors were markedly different from PASS factors. For our purposes, we concluded that the PASS was not replicated since it did not appear logical to obtain normative data on scales which contained many items with different factorial loadings. Thus new scales were constructed for the standardization study.

The failure of the PASS to cross validate is difficult to understand. There were four known differences in the two studies: (1) replacement of non-loading items with AD items, (2) reduction of scale length from three- to two-points, (3) increase in sample size, and (4) different populations. These changes should not be sufficient to account for the differences between the two factor structures. This suggests that factor analysis is sensitive to other influences besides

children's behavior, the dependent variable in this study. If this is true, then the factors elicited in this study cannot be considered dimensions of child behavior because the factors are apparently specific to teacher ratings of child behavior when using the SBCL.

Despite differences between the SBCL and the PASS, similarities exist in all factor studies of teacher ratings of child behavior. The problem is that exact replication seldom occurs, so that true behavioral dimensions defy definition. Three studies (Cattell and Coan, 1957; and Digman, 1963; 1965) report, among others, the four main SBCL dimensions of LNA, Agg, Anx, and AD. Ross, et al. (1965) and Schaefer, et al. (1966)[5] isolated LNA, Agg, and Anx while Peterson (1961) reported the Agg and Anx dimensions. The author has pointed out previously (Miller, 1967b) that a way must be found for reaching a consensus and suggested second order factoring as a plausible solution. The second order factoring of the SBCL Scales revealed only one primary dimension which is again at variance with all other factorial studies. Second order factoring thus appears to be no panacea for reaching consensus.

The SBCL scales should be useful in clarifying these issues for they hold considerable promise for both research and diagnosis. The normative sample was extensive and great care was taken to insure that the general population of school

children was represented. Both split-half and test-retest reliabilities reached acceptable limits. Norms for male, female, and total populations were obtained as well as accumulative percentages for special types of children. While validating studies have not been done, it is reasonable to assume that children rated 1½ σ above the mean on any scale, except Ext, would be candidates for remedial attention.

One of the more interesting findings of this research is the LNA factor and its corollary relationship with psychopathology. It is not surprising that teachers emphasize achievement but it is unexpected to find all deviant child behavior related to the achievement dimension. There are obviously two primary sources of variation affecting these results: the first assumes that the variation lies within the teacher, and the second, that it lies within the child. If the teachers are the primary source, then a "halo effect" operates in which all behavior is judged in terms of the child's academic competence. As competence improves, the teacher reports less deviance, perhaps by making allowances for observed behaviors. On the other hand, as competence decreases, harsher judgments are imposed and more deviancy is observed.

There is ample evidence in the literature that teacher judgment is influenced by factors other than the child's behavior, and that students in turn are influenced by teacher

opinion (Davidson and Lang, 1960; Datta, et al., 1968; de Groat and Thompson, 1949; Fox, et al., 1964; and Goldblatt and Tyson, 1962). Perhaps the most definitive study is that of Rosenthal (1966) who showed that teachers' ratings of intelligence at the end of the year more closely approximated false I. Q.'s given to them at the beginning of the year than the child's true I. Q.. Perhaps in our case, the -.42 correlation between I. Q. and the TD scale reflects the teachers' prior knowledge of test performance.

On the other hand, if the primary source of variation lies within the child, then the findings would mean that pathology and achievement are in fact inversely related to the extent that as pathology increases, performance declines. Such a relationship is not unexpected, except that both achievement and pathology are highly correlated with test intelligence. This leads to the hypothesis that all behaviors, social, cognitive, verbal, emotional, and perceptual, are mediated centrally in such a way that competence or deficits in one area are likely to be associated with similar performance in others. Carrying this line of reasoning one step further would lead to the conclusion that measurement of efficiency in any one modality would not only predict efficiency in other modalities, but would also reflect the efficiency level of the central process. Thus, high intelligence would not only predict low deviancy, but also competence in all

behavioral modalities, as well as indicating a smoothly functioning internal system. Psychopathology would thus be defined in terms of a single dimension with degree of deviancy in all behavioral modalities reflecting the extent of the central pathological process. Of course, such a hypothesis does not infer that intelligent children are never emotionally disturbed, for the variation within each intelligence level indicates disturbance at each level. What is being postulated is a general theory of personality where the person is viewed as an integrated unit in which each expressive modality reflects the coping efficiency of the person as a whole.

Research in support of this hypothesis is generally more inferential than the previous hypothesis. The early studies of Terman and Oden (1947) found high correlations among performance abilities with bright children being better adjusted and better coordinated physically than their less intelligent contemporaries. Datta, et al. (1968) demonstrated a relationship between adjustment and intelligence. However, their study indicated that multiple factors were involved in this problem. The best predictor of psychiatric skills in a residency training program was test intelligence (Holt and Luborsky, 1958). Psychiatric skills involve cognitive abilities but also social and emotional competence which again suggests an interrelation of all skills. In a recent series of studies, Zax, et al. (1968) found a predictive relation

between disturbed behavior in the first grade and academic difficulties in the seventh. Havelkova (1968) found that I. Q., much to her surprise, was related to degree of adjustment in autistic children and Smith (1966) found dramatically elevated deviant behavior in EMR classes as compared with the general population. A long series of studies has generally shown that adjudicated delinquents have lower I. Q.'s than the general population and many studies have tried to understand the decrement in test performance of schizophrenics. Many of these studies have discounted the deficiencies in pathological populations arguing that there would be no intellectual differences in the premorbid state. On the other hand, Rodnick (1968) states that research has now demonstrated that the premorbid level of social competence cannot be ignored as a subject variable in schizophrenia. Finally, Zigler and Phillips (1962) have argued for a social competence dimension which is continuous in nature and that psychopathology is a unitary phenomenon rather than a collection of discrete entities. Clearly, there are groups of researchers and theorists who are developing the concept of social or achievement competence as a dimensional construct which may help to clarify much of the contradicting evidence currently available in the literature of psychopathology.

The relationship between intelligence and psychopathology found in this study opens up interesting possibilities. The

answers cannot be obtained from the SBCL data nor from current studies, but the implications for either alternative is far reaching. If teachers are midjudging behavior to the extent proposed by the halo hypothesis, then, it is no wonder that education is failing to achieve its desired effects as Coleman, et al. (1966) postulates. On the other hand, if the central mediating hypothesis is correct, then behavioral tests could be developed which would measure psychopathology in the same way that intelligence tests measure cognitive functioning. Such measures should help clarify the yet unsolved problems of classification of psychopathological disorders of childhood. Further, estimates of the central process, as indicated by assessment of all modalities, would probably be a more valid index of psychopathology, or achievement competence than measures obtained from a single modality.

One final point of interest concerns the lack of correlation between age and grade on each SBCL Scale other than AD. The variation in AD reflects both the nature of the scale and the children's failures. We would not expect first graders to be one grade behind academically. Failures and decrements in academic skills would increase as grade increases. The explanation of the lack of variation in the other scales is not readily apparent. Ross, et al. (1965) found the same lack of variation across grades for the PASS, but Peterson (1961)

found a drop in the third and fourth grade levels, with boys tending to decelerate with age and girls to increase.

Our results confirm Ross' findings. There is no apparent reason why behavioral problems would remain constant across age, for it is generally believed that maturation leads to greater impulse control. Studies of Macfarlane, et al. (1954) show that considerable individual variation across the elementary school years. One wonders why group means average out. The explanation might again lie within the teachers who might have a built-in age correction factor. This would mean that teachers are not rating behavior per se, but rather behaviors relative to age mates. Whatever the explanation, this finding bears further investigation.

This study was undertaken to develop a tool for obtaining teacher ratings of children's deviant behavior. As so frequently occurs, the research raised more questions than it answered. We now know the general distribution of deviant behaviors in an urban elementary school population. We know that these behaviors are relatively constant across a time span of 45 days when the same teacher is used as an observer. We also know that these behavioral observations are affected by many variables but the most significant are sex, race, SES, and I. Q.. Further, teachers appear to be rating along an achievement-competnece dimension around which all deviant behavior is organized. This achievement dimension is strongly

correlated with test intelligence and is inversely related to pathological behavior. What we do not know is the extent to which the behaviors are specific to a given classroom and teacher. We now need to determine how general these behaviors are across time, situation, and observer. To what extent do these scales predict behavior when the child is in different classrooms with different teachers in different grades? How does classroom behavior compare with behavior when parents or clinicians are used as observers at home and in the clinic? These questions remain for future research. The SBCL appears to be an instrument which can help to find answers to these problems.

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Footnotes

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2. The study was made possible through the cooperation of Mr. Samuel Noe, Superintendent, and Mr. Benjamin Freeman, Director of Pupil Personnel, Louisville City School System; Mr. Richard Van Hoose, Superintendent, and Mr. James Farmer, Assistant Superintendent, Jefferson County School System; Rev. Thomas Casper, Superintendent, Louisville Catholic School Board; and all Headmasters of private schools in the Louisville metropolitan area. I am particularly indebted to all principals and teachers who volunteered their valuable time from an already over-crowded day to complete one more questionnaire for one more study. I wish to thank them for the obvious care and attention they gave to the instructions and to the ratings.

3. I wish to express my appreciation to Mr. Arnold Woodruff of the Purdue Computer Center, for programming and running all statistical computations on a CDC 6500, using Statistical Section Library Programs.

4. Statistical data, such as the PASS correlation matrix, will be deposited with the Library of Congress, once the final report has been approved.

5. Schaefer, E. S., Aaronson, May, and Burgoon, Betty. Classroom Behavior Inventory (Form for Grades 3 through 12). Personal Communication, 1966.

TABLE 1

Demographic Data for SBCL
Standardization Sample

DIVISION	N	%
Sex		
Male	2627	48.89
Female	2746	51.11
Total	5373	
Race		
White	4295	81.19
Black	995	18.81
Total	5290	
Religion		
Protestant	2614	61.09
Catholic	1440	33.65
Jewish	44	1.03
Other	181	4.23
Total	4279	
Age		
5 and below	139	2.59
6	559	10.43
7	919	17.14
8	820	15.29
9	820	15.29
10	776	14.47
11	756	14.10
12	455	8.48
13 and above	118	2.21
Total	5362	
I.Q.		
70 and below	103	2.76
71-80	236	6.02
81-90	511	13.04
91-100	846	21.59
101-110	966	24.65
111-120	717	18.29
121-130	342	8.73
131-140	144	3.67
141 and above	49	1.25
Total	3919	
Mean: 103.01		
S. D.: 14.83		

DIVISION	N	%
Grade		
Kdg.	202	3.88
1	1033	19.86
2	836	16.07
3	864	16.61
4	789	15.17
5	766	14.72
6	712	13.69
Total	5202	
School System		
City	1868	34.77
County	2540	47.27
Parochial	902	16.79
Private	63	1.17
Total	5373	
Father's Education		
6th	392	10.13
9th	960	24.81
12th	1723	44.54
2 college	260	6.72
4 college	356	9.20
Post-graduate	178	4.60
Total	3869	
Mean: 10.59		
Mode: 12.00		
Father's Estimated Income		
$3000 and below	527	12.68
$3-5	1002	24.11
$5-8	1691	40.69
$8-15	766	18.43
$15-25	126	3.03
$25 and above	44	1.06
Total	4156	
Mean: $7,250		
Mode: $5-8 thousand		

TABLE 2

SOCIO-ECONOMIC STATUS RATINGS

FOR SBCL STANDARDIZATION SAMPLE

LEVEL	SES SCORE[a]	% EXPECTED	% OBTAINED	N OBTAINED
Lower	0-19	13.90	12.71	458
Lower-Middle	20-39	22.34	23.82	857
Middle	40-59	27.96	36.96	1332
Upper-Middle	60-79	23.70	12.91	465
Upper	80-99	12.10	13.60	490
Total				3602

[a]U.S. Bureau of the Census. Methodology and Scores of Socioeconomic Status. Working Paper No. 15. Washington, D.C., 1963, p. 6 (Percent Distribution of Family Heads by Socioeconomic Status and Status Consistency for North Central and South Regions: 1960).

TABLE 3

Varimax Rotated Factor Loadings of SBCL
Using Total Population

No.	Abbreviated Iters	Freq	I	II	III	IV	V	VI	Comm
	% of Variance, Principal Components		21.3	9.5	4.6	2.6	2.3	2.3	
	% of Variance, Rotated		11.7	14.4	6.0	4.6	2.7	3.0	
	I LOW NEED ACHIEVEMENT (n=28)								
18	Never finishes a task	23	77	18	02	13	-01	-02	63
19	Lacks ambition to do well in school	21	74	15	06	20	04	-08	62
36	Finds it hard to study	31	74	15	13	27	-03	09	67
57	Can't concentrate	26	73	16	15	23	-02	08	64
2	Gives up on hard tasks	32	66	16	21	18	-06	01	54
33	Off in a world of his own	21	57	08	28	07	09	-19	46
16	Air of defeatism with hard tasks	20	54	15	33	22	-06	-08	48
40	School performance below ability	16	53	21	03	12	02	03	35
43	Slow to catch on	24	50	0	18	57	07	-08	62
52	Drags feet when asked to do something	10	47	27	14	-05	-01	-21	36
44	Doesn't question when puzzled	31	44	08	25	18	24	-14	37
82	Unconcerned when he misbehaves	19	43	46	-03	03	10	05	41
8	Poorly coordinated with hands	18	40	11	16	19	08	06	24
91	Under-achiever	17	40	13	01	-16	-02	11	21
70	Actions are of younger child	15	39	19	22	25	10	05	31
53	Accepts my suggestions	90	-38	-41	-06	03	0	21	36
58	Sees the bright side of things	88	-38	-23	-22	-05	-11	34	38
69	Popular with peers	79	-41	-22	-27	-03	-22	29	42
27	Sure of himself	51	-43	05	-46	-28	-01	04	48
85	Self-confident	60	-44	05	-47	-25	-03	12	49
12	Volunteers to recite in class	70	-45	09	-22	-16	-12	23	35
6	Helpful	81	-50	-22	-10	0	-14	22	38
38	Works well by himself	73	-66	-17	-08	-16	03	-09	51
22	Does homework	78	-67	-17	03	-10	-06	02	49
7	Alert in class	68	-71	-10	-15	-26	-05	11	61
48	Concentrates well	74	-71	-13	-15	-23	0	-04	60
64	Interested in school work	82	-73	-20	-04	-14	-04	10	61
76	Finishes assignments	75	-76	-15	-05	-13	-01	0	62
	II AGGRESSION (n=36)								
20	Gets others angry	7	13	69	-02	09	14	-01	52
5	Fights over nothing	6	11	68	-02	12	10	-10	10
37	Wants things his own way	6	08	68	06	-02	02	-15	48
65	Tries to get others in trouble	8	15	67	01	06	11	03	48
66	Does things just to attract attention	13	25	67	02	-08	04	34	62
51	Tries to be the center of attention	12	17	66	02	-08	0	38	61
13	Hits and pushes other children	12	20	65	-04	10	10	06	48
21	Argues when told no	9	05	65	07	-03	-06	-05	43

[Varimax Rotations of **SBCL**,. continued (2)]

No.	Abbreviated Items	Freq	I	II	III	IV	V	VI	Corr
	AGGRESSION (continued)								
92	Disturbs with boisterous behavior	9	23	65	-03	02	08	28	56
25	Bosses other children	13	01	63	-01	-02	-02	10	41
72	Threatens to hurt others when angry	8	07	63	-02	19	07	-07	57
89	Has "chip on shoulder"	7	15	62	10	05	02	-33	53
15	Finds fault with others' actions	12	07	61	10	02	01	04	39
35	Likes an audience all the tire	12	18	61	01	-09	02	38	55
77	Gives others dirty looks	12	10	61	08	10	02	-21	44
86	Slams doors etc., when angry	7	06	61	07	10	-03	-19	43
47	Argues with me	6	06	60	02	-03	-09	-07	38
62	Stubborn	6	19	60	12	03	-08	-20	46
23	Teases other children	13	12	59	-04	09	07	17	41
28	Uses abusive language to peers	4	06	58	-02	16	09	-16	40
59	Fights with smaller children	4	08	58	-01	15	13	-12	39
34	Discipline makes him furious	4	05	57	09	04	-01	-31	44
87	Acts in a "dare-devil" manner	8	11	57	-07	03	03	12	36
11	Acts up if not watched	23	33	56	-03	03	-01	23	47
49	Boasts his toughness	4	04	56	-01	10	04	02	33
3	Interrupts everyone	15	16	55	03	-02	01	36	46
54	Sulks when things go wrong	16	14	54	24	05	-09	-27	45
81	Finds fault with adults' instructions	5	10	54	07	-04	-01	-17	33
78	Interrupts with silly questions	6	19	53	07	-03	06	24	38
56	Resents any criticism	6	12	47	25	-04	-02	-32	40
82	Unconcerned when he misbehaves	19	43	46	-03	03	10	05	41
29	Changeable moods	26	21	44	27	05	-09	-12	34
46	Never still	16	22	43	0	-02	17	38	41
39	Refuses to speak when angry	8	07	42	24	09	-05	-35	37
45	Fights back if another asks for it	49	01	38	-14	06	-18	09	21
17	Considerate of others	84	-36	-61	01	02	-09	0	51
III	ANXIETY (n=18)								
55	Becomes frightened easily	15	07	-06	69	07	05	03	50
26	Upset by changes around him	15	11	20	63	07	-02	01	45
24	Afraid to make mistakes	26	04	-07	61	10	-06	-02	39
83	Cries easily	12	01	09	57	0	-03	0	33
90	Becomes embarrassed easily	35	03	-14	57	07	0	-04	35
84	Afraid of strange adults	9	09	-04	56	02	05	-09	33
95	Much anxiety	5	06	07	52	07	08	0	29
61	Fears being hurt at play	5	04	01	47	-05	14	-09	26
68	Has problems speaking when excited	24	14	05	47	18	03	07	28
14	Hands shake when he recites	5	06	0	46	06	03	04	22
79	Slow in making friends	25	32	05	44	05	22	-30	43

[Varimax Rotations of **SBCL,** continued (3)]

No.	Abbreviated Items	Freq	I	II	III	IV	V	VI	Comm
	ANXIETY (continued)								
50	Thinks he's worthless	6	25	08	36	15	09	-19	27
75	Prefers to be and play alone	7	20	-01	35	-08	26	-32	34
96	Frequent physical complaints	7	14	11	35	04	01	-05	16
10	Stands around on playground	6	19	-03	34	-09	20	-23	25
68	Prefers adults to children	6	09	02	34	-09	12	-05	15
27	Sure of himself	51	-43	05	-46	-28	-01	04	48
85	Self-confident	60	-44	05	-47	-25	-03	12	49
IV	**ACADEMIC DISABILITY (n=8)**								
9	Reading ability 1 grade lower	33	34	09	10	75	02	02	70
42	Behind at least 1 grade in school	26	29	11	10	75	02	0	67
60	Behind at least 1 grade in spelling	26	38	11	09	70	03	02	66
94	Behind at least 1 grade in rath	29	38	09	13	68	05	-02	64
93	Behind at least 2 school grades	11	21	13	08	63	08	-06	48
43	Slow to catch on	24	50	0	18	57	07	-08	62
4	Poor penmanship	26	35	12	08	36	05	08	28
73	Average or above I. Q.	68	-30	-06	-10	-60	-08	06	46
V	HOSTILE ISOLATION (n=7)								
71	Never sticks up for self when teased	20	-02	-10	12	03	67	01	47
67	Never fights back tho hit first	22	-07	-13	12	01	59	01	39
63	Never speaks up tho rightly angry	24	05	-19	23	04	54	-05	39
41	Has no friends	6	10	12	07	03	47	-15	27
31	Doesn't respect others' things	17	12	31	-05	09	46	06	35
74	Doesn't take orders from peers	23	10	29	-01	06	44	06	30
32	Doesn't forget things which anger him	18	02	25	04	09	37	-06	21
VI	EXTRAVERSION (n=12)								
1	Friendly	92	-25	-10	-19	02	-22	43	34
80	Happy as most children	84	-33	-21	-31	-05	-15	39	42
35	Likes an audience all the time	12	18	61	01	-09	02	38	55
46	Never still	16	22	43	0	-02	17	38	41
51	Tries to be center of attention	12	17	66	02	-08	0	38	61
3	Interrupts everyone	15	16	55	03	-02	01	36	46
58	Sees the bright side of things	88	-38	-23	-22	-05	-11	34	38
66	Does things to attract attention	13	25	67	02	-08	04	34	62
56	Resents any criticism	6	12	47	25	-04	-02	-32	40
75	Prefers to be and play alone	7	20	-01	35	-08	26	-32	34
89	Has "chip on shoulder"	7	15	62	10	05	02	-33	53
39	Refuses to speak when angry	8	07	42	24	09	-05	-35	37

Table 4

SBCL Scale: SBCL Number (No.), Frequency per 100 (f), and Major Rotated Factor Loading (1) for Each Scale

No.	f	Item Content	1
Scale 1: Low Need Achievement			
18	23	Fails to carry out tasks (Homework assignments, seat work, etc.)	77
19	21	He lacks the ambition to do well in school	74
36	31	Finds it hard to study	74
57	26	Distractible; can't concentrate	73
2	32	He tends to give up if he has something hard to finish	66
33	21	He seems to be off in a world of his own	57
16	20	He approaches a difficult task with an air of defeatism	54
40	16	His school performance is far below his capabilities	53
43	24	Seems dull; slow to catch on	50
52	10	He "drags his feet" when requested to do something	47
44	31	He will not ask questions even when he doesn't know how to do the work	44
82	19	He seems unconcerned when he misbehaves	43
8	18	Poorly coordinated when doing things with his hands such as coloring or pencil work	40
LNA (continued)			
91	17	Bright but doesn't apply self (Under Achiever)	40
70	15	He does things which are normal for children much younger than he	39
53	90	He accepts my suggestions	-38
58	88	He is able to see the bright side of things	-38
69	79	He is popular with his classmates	-41
27	51	He is sure of himself	-43
85	60	He is self-confident	-44
12	70	He volunteers to recite in class	-45
6	81	He is a helpful child	-50
38	73	He works well by himself	-66
22	78	He does his homework	-67
7	68	He is alert in class	-71
48	74	He is able to concentrate on things	-71
64	82	He is interested in school-work	-73
76	75	He finishes his classroom assignments	-76

(TABLE 4 continued)

No.	f	Item Content	l
Scale 2: Aggression			
20	7	He does things to get others angry	69
5	6	He starts fighting over nothing	68
37	6	He has to have everything his own way	68
65	8	He tries to get other children into trouble	67
66	13	He does things just to attract attention	67
51	12	He tries to be center of attention	66
13	12	He hits and pushes other children	65
21	9	He will put up an argument when told he can't do something	65
92	9	He disturbs other children with his boisterous behavior	65
25	13	He is bossy with other children	63
72	8	He threatens to hurt other children when he is angry	63
89	7	He has a "chip on his shoulder"	62
15	12	He finds fault with what other children do	61
35	12	He likes an audience all the time	61
77	12	He gives other children dirty looks	61
86	7	When angry he will do things like slamming the door or banging the desk	61
47	6	He argues with me	60
62	6	He is stubborn	60
23	13	He teases other children	59
28	4	He uses abusive language toward other children	58
59	4	He fights with smaller children	58
34	4	Any form of discipline makes him furious	57
87	8	He acts in a "dare-devil", fearless manner	57
11	23	He acts up when I'm not watching	56
49	4	He boasts about how tough he is	56
3	15	He interrupts whomever is speaking	55
54	16	He sulks when things go wrong	54
81	5	He finds fault with instructions given by adults	54
78	6	He deliberately interrupts what is going on by asking silly questions	53

(Table 4 continued)

No.	f	Item Content-	l
Scale 3: Anxiety			
55	15	He becomes frightened easily	69
26	15	He is easily upset by changes in things around him	63
24	26	He is afraid of making mistakes	61
83	12	He cries easily	57
90	35	He becomes embarrassed	57
84	9	He is afraid of strange adults	56
95	5	Much anxiety - Afraid of such things as storms, school, death, injury, war, (Considered phobic)	52
61	5	He is fearful of being hurt at play	47
88	24	He has difficulty speaking clearly when he is excited or upset	47
14	5	His hands shake when he is called on to recite	46
79	25	He is slow in making friends	44
50	6	He seems to think that he's worthless	36
75	7	He prefers to be alone and play alone	35
96	7	Frequent headaches, stomach aches or other non-specific physical complaints	35

No.	f	Item Content	l
Anxiety (continued)			
10	6	On the playground he just stands around	34
68	6	He prefers to attach himself to an adult rather than play with children	34
27	51	He is sure of himself	-46
85	60	He is self-confident	-47
Scale 4: Academic Disability			
9	33	Reading ability at least one grade level below age expectation	75
42	26	Behind at least one school grade due to academic difficulties	75
60	26	Spelling performance at least one grade level below age expectation	70
94	29	Arithmetic skill at least one grade level below age expectation	68
93	14	Behind at least two school grades due to academic difficulties	63
43	24	Seems dull; slow to catch on	57
4	26	Penmanship (handwriting) at least one grade level below age expectation	36
73	68	Average or above I.Q. (Intelligence Quotient)	-60

(TABLE 4 continued)

No.	f	Item Content	l
Scale 5: Hostile Isolation			
71	20	He never sticks up for himself when other children pick on him	67
67	22	He never fights back even if someone hits him first	59
63	24	He never speaks up even when he has every right to be angry	54
41	6	He has no friends	47
31	17	He does not respect other people's belongings	46
74	23	He does not take orders when other children are in charge	44
32	18	He does not forget things which anger him	37
Scale 6: Extraversion			
1	92	He is friendly	43
80	84	He seems as happy as most children	39
35	12	He likes an audience all the time	38
46	16	He never seems to be still for a moment	38
Extraversion(continued)			
51	12	He tries to be the center of attention	38
3	15	He interrupts whomever is speaking	36
58	88	He is able to see the bright side of things	34
66	13	He does things just to attract attention	34
56	6	He resents even the most gentle criticism of his work	-32
75	7	He prefers to be alone and play alone	-32
89	7	He has a "chip on his shoulder"	-33
39	8	When angry he will refuse to speak to anyone	-35

Table 5

Reliability Estimates for SBCL Scales

Scales	No. of Items	Split-Half[a]	Test-Retest[b]
1. Low Need Achievement	28	.88	.89
2. Aggression	36	.90	.83
3. Anxiety	18	.72	.80
4. Academic Disability	8	.70	.70
5. Hostile Isolation	7	.44	.40
6. Extraversion	12	.72	.74
7. Total Disability	95	.93	.89

a. N = 5,370

b. N = 178

Table 6

Raw Score and T-Score Equivalents for SBCL Using Total Population

T	LNA	Agg.	Anx.	AD	HI	Ext.	TD
N	28	36	18	8	7	12	95
$\bar{X}$	6.56	4.17	2.96	2.05	1.29	7.04	15.95
σ	7.25	6.47	3.26	2.60	1.52	1.59	14.89
S.E.	0.10	0.09	0.04	0.04	0.02	0.02	0.20
100		36					
		35	18				86
95							
		33	17				82
		32					81
90			16				
		29					73
		28	15				72
85					7		
		26	14				66
	28	25					65
80			13		6	12	
	27	23					58
	26	22	12				57
75					5	11	
	24	20	11				51
	23	19	10	8			50
70						10	
	20	16	9	7			43
	19	15					42
65			8	6	4		
	16	13					36
	15	12	7				35
60				5	3	9	
	13	10	6				28
	12	9	5	4			27
55					2	8	
	9	7	4	3			21
	8	6					20
50			3	2	1	7	
	6	3					13
	5	2	2				12
45				1		6	
	2	0	1				6
	1						5
40			0	0	0		
	0						0
35						5	
30						4	
25						3	
20						2	
15							
10						1	
5						0	

Table 7

t Tests for Sex for Each SBCL Scale

Scale	Male		Female		
	$\bar{X}$	σ	$\bar{X}$	σ	t
Low Need Achievement	7.77	7.72	5.41	6.58	12.05*
Aggression	5.30	7.29	3.09	5.37	12.58*
Anxiety	2.95	3.16	2.97	3.36	- 0.30
Academic Disability	2.41	2.70	1.71	2.44	9.72*
Hostile Isolation	1.31	1.53	1.28	1.52	0.84*
Extraversion	7.20	1.70	6.88	1.46	7.54
Total Disability	18.54	16.01	13.49	13.28	12.56*

*$p \leq .01$

Table 8

F Scores for One-way Analysis of Variance on SBCL

Scales for Demographic Variables

	LNA	Agg	Anx	AD	HI	Ext	TD
	1	2	3	4	5	6	7
Age	4.64*	2.89*	0.90	34.38*	1.75	1.81	6.29*
Race	30.28*	57.14*	0.02	105.96*	123.45*	0.61	72.19*
Religion	7.48*	5.05*	3.44	16.31*	2.92	1.38	9.60*
Grade	2.82*	0.63	1.35	11.05*	4.78*	1.71	1.79
Intelligence	110.34*	21.13*	44.36*	376.85*	9.09*	5.26*	122.03*
S E S	53.35*	11.53*	18.81*	113.17*	19.80*	7.16*	60.37*
Teaching Expr.	0.83	1.65	4.33*	2.85*	8.34*	0.12	1.51

* $p > .01$

Table 9

Means and Standard Deviations for SBCL Scales by Sex,[a] Race, and Socioeconomic Status (SES)

		L N A		Agg		Anx		A D		T D	
	N	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ
Sex:											
Male	2,626	7.77	7.72	5.30	7.29	2.95	3.16	2.41	2.70	18.54	16.01
Female	2,744	5.41	6.58	3.09	5.37	2.97	3.36	1.71	2.44	13.49	13.28
Race:											
Caucasian	4,294	49.08	9.99	49.09	9.47	49.58	10.16	48.98	9.64	48.95	9.85
Negro	993	51.03	10.45	51.74	11.81	49.62	9.66	52.55	10.75	51.95	10.70
S E S:											
Low	458	54.64	11.27	52.30	12.62	52.14	11.00	56.12	11.47	54.69	11.47
Low-Mid	857	50.56	10.51	49.65	10.56	50.52	10.70	52.13	10.62	50.72	10.54
Mid	1,331	48.38	9.44	49.23	9.53	49.13	9.72	48.47	9.20	48.56	9.52
Up-Mid	465	47.13	8.80	48.52	8.58	47.97	9.33	46.52	7.66	47.11	8.57
Up	490	46.04	8.05	48.52	8.66	47.40	8.95	45.31	6.69	46.15	7.96

a. Data for Sex presented in Raw Scores; other categories in T Scores.

Table 10

Means and Standard Deviations for SBCL Scales

by Test Intelligence (I. Q.)

		L N A		Agg		Anx		A D		T D	
I. Q.	N	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ
70-	108	60.22	10.80	56.26	16.05	58.69	12.17	66.84	7.90	62.37	12.91
71-80	235	57.08	10.48	54.89	14.81	54.15	10.27	63.77	8.72	58.61	11.47
81-90	510	55.13	10.38	52.10	12.74	52.93	10.53	59.20	9.85	55.51	10.82
91-100	846	50.70	10.22	49.27	9.36	50.51	10.33	51.75	9.85	52.41	9.84
101-110	966	47.82	9.10	48.77	8.91	48.62	9.36	46.71	7.20	47.71	8.64
111-120	717	45.50	7.51	48.53	8.83	47.30	8.46	44.42	5.36	45.86	7.69
121-130	342	44.41	7.17	47.97	8.29	46.21	8.48	43.26	2.98	44.62	7.17
131-140	126	42.89	4.02	47.48	7.44	45.22	7.40	42.74	1.95	43.61	5.11
141+	47	43.87	6.16	50.34	10.25	44.66	5.85	42.68	1.68	45.51	7.37

Table 11

Intercorrelation of Demographic Variables,

Teacher Ratings, and SBCL Scales

Demographic	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Sex	---													
2 Age	-03	---												
3 Race	-00	-05	---											
4 Religion	02	-02	-13	---										
5 Grade	-00	62	06	-06	---									
6 I. Q.	07	-17	-22	09	-13	---								
7 S E S	01	-01	-26	10	-02	45	---							
8 Teaching Experience	-00	07	03	-03	04	-05	-16	---						
Teacher Ratings														
9 Intellectual Ability	10	-06	-15	03	-01	69	42	-06	---					
10 Academic Skills	13	-07	-15	03	-03	66	38	-05	84	---				
11 Academic Performance	15	-03	-11	02	01	45	28	-04	66	74	---			
12 Soc and Emot Adjustment	13	-01	-05	00	04	35	23	-03	53	54	55	---		
13 Personal Appeal	06	-08	-02	00	-02	26	23	00	42	40	41	56	---	
14 SBCL Adjustment	-12	03	03	01	-02	-32	-19	07	-43	-46	-46	-58	-44	---
S B C L Scales														
15 L N A	-16	04	07	-01	-01	-42	-23	-02	-57	-61	-65	-58	-52	59
16 Aggression	-17	06	09	-02	03	-17	-10	-03	-19	-25	-31	-43	-35	33
17 Anxiety	00	02	01	01	-00	-28	-14	-07	-36	-36	-34	-49	-38	33
18 Academic Disability	-14	21	13	-02	10	-62	-33	05	-73	-77	-61	-45	-37	41
19 Hostile Isolation	-01	-03	14	-01	-00	-12	-14	10	-16	-14	-15	-18	-16	15
20 Extraversion	-10	-04	-01	01	-03	09	09	00	13	10	08	14	17	-07
21 Total Disability	-17	08	10	-01	02	-42	-24	-02	-54	-59	-61	-64	-54	53

Table 11

Intercorrelation of SBCL Scales

SBCL Scales	15	16	17	18	19	20	21
15 L N A	---						
16 Aggression	46	---					
17 Anxiety	57	14	---				
18 Academic Disability	67	28	39	---			
19 Hostile Isolation	22	17	23	17	---		
20 Extraversion	-18	24	-41	-12	-10	---	
21 Total Disability	90	74	61	68	35	-10	---

Table 12

Second Order Factor Analysis of Demographic Variables and SBCL Scales

Content	Principal Axis Factors			Varimax Rotated Factors		
	1	2	3	1	2	3
Per cent of Variance	33	09	07	29	12	08
Demographic:						
1 Sex	-18	-08	21	-24	-11	13
2 Age	11	-59	-64	05	-09	-88
3 Race	17	-28	29	-00	-44	04
4 Religion	-04	23	-09	06	23	08
5 Grade	05	-62	-60	-03	-10	-86
6 I. Q.	-66	44	-20	-41	69	15
7 S E S	-43	35	-38	-19	64	-06
8 Teaching Experience	05	-24	11	-06	-25	-07
Teacher Ratings:						
9 Intellectual Ability	-81	23	-25	-61	64	-02
10 Academic Skill	-84	21	-19	-65	59	02
11 Academic Performance	-78	01	-09	-69	37	-03
12 Soc. and Emot. Adjustment	-75	-25	07	-78	09	-07
13 Personal Appeal	-62	-20	14	-67	03	01
14 SBCL Adjustment	64	19	-08	67	-08	03
SBCL Scales:						
15 L N A	84	20	-11	86	-14	01
16 Aggression	50	32	-44	66	28	-16
17 Anxiety	59	23	-00	62	-08	12
18 Academic Disability	81	-23	02	66	-50	-16
19 Hostile Isolation	29	11	04	30	-07	09
20 Total Disability	88	25	-24	94	-04	-06

Appendix A

MEMO TO PRINCIPAL

Enclosed please find the material for standardizing the Pittsburgh Adjustment Survey Scales (PASS). The standardization project was described to you briefly by the Board of Education October 2, 1967. The envelope contains one packet per teacher consisting of:(1) Directions for Ratings, (2) Instructions for Random Selection of Child, (3) Random Selection Sheet, and (4) Two Pittsburgh Adjustment Survey Scale forms. The number of teachers per grade was secured from the Board of Education. The grades are separated by white sheets marked with red numbers. We have supplied additional forms if the number for your school is incorrect. Also, there are extra packets for you and the school counselor.

Please read directions carefully because this is a standardization project and its success depends on directions being carried through exactly.

RATINGS TO BE DONE: November 27-30, 1967

IF YOU HAVE ANY QUESTIONS CONTACT:

Lovick C. Miller, Ph.D.
Director of Research
Child Psychiatry Research Center
608 S. Jackson Street
Louisville, Kentucky 40202
Telephone No.: 582-2211 Ext. 552

Appendix A

Directions for Ratings

To: Teachers, Counselors, and Principals

Subject: Standardization of Pittsburgh Adjustment Survey Scales

Purpose: The Child Psychiatry Research Center has contracted with the U.S. Office of Education to standardize teacher ratings of social and emotional adjustment of elementary school children. We plan to standardize a modified version of the Pittsburgh Adjustment Survey Scales (PASS) in Louisville and Jefferson County. The scales are enclosed for your information. We are asking your help in obtaining ratings in your school. We would like for each elementary school teacher to randomly select (by procedure outlined in #4 below) one boy and one girl from her classroom and fill out the PASS. Normative data for each of the scales will be attained and returned to each school for your interest and use.

Procedure:

(1) Ratings are to be made during week of November 27, 1967. Ratings should be completed and returned on December 1, 1967 to:
(City) - Central Office, Division of Pupil Personnel
(County) - Division of Psychological Services
(Catholic) - Child Psychiatry Research Center (Return envelope enclosed)

(2) Please ask all teachers who have not been teaching class regularly for two calendar months to disqualify themselves.

(3) Each teacher is to receive one Instruction for Random Selection; one Random Selection Sheet; two copies of the Pittsburgh Adjustment Survey Scales (PASS).

(4) Follow instructions for selecting male child on "Instructions for Random Selection". Write down his name on one copy of Standardization Questionnaire. Repeat for female child.

(5) NOTE: If you have not known the selected child for at least two calendar months, the next boy or girl on your roll whom you have known for two months should be selected for rating.

Directions for Ratings (continued)

(6) Once the names of the male and female child have been selected and written on the Questionnaire, fill out the Face Sheet information on the male child. If information is not known and cannot be obtained, write "no information". Please see that if information on any question is available that it is recorded before the questionnaires are returned.

(7) Once all information is filled out on the Face Sheet on male child, read each PASS statement and mark "yes" or "no" as to whether this statement applies to the child. It is extremely important to mark each statement "yes" or "no". If you are in doubt, circle the one most likely to be correct.

Exception: Kindergarten Teachers should not mark academic performance questions.

(8) Please repeat steps 4, 5, 6, & 7 for female child.

(9) Go back over Face Sheet and Questionnaire and make sure all questions are answered.

(10) Turn in your Questionnaires and Random Selection Sheets to your Principal.

(11) For Principals: Please examine each check list for omissions. If any omissions occur, see if the information can be supplied. If not, mark "no information." Then, tie the Questionnaires and Random Selection Sheets together and return to:
(City) - Central Office, Division of Pupil Personnel
(County) - Division of Psychological Services
(Catholic) - Child Psychiatry Research Center (Return envelope enclosed)

(12) For your information, the entire rating procedure should not take more than one half hour. Each PASS takes approximately six minutes to fill out.

(13) We are indeed grateful to you for your time and interest. We hope the results of this effort will help you to identify and select maladjusted children with greater ease.

(14) If there are any questions, please contact:

Dr. Lovick C. Miller, Ph.D.
608 South Jackson Street
Louisville, Kentucky 40202
Telephone No.: 582-2211 Ext. 552

Appendix A

Instructions for Random Selection of Child to be Rated

(1) Count the total number of boys on your class roll and circle that number in Column A on the Random Selection Sheet.

(2) Next, circle the number in Column B directly opposite the circled number in Column A.

(3) Beginning with the first boy's name in your roll book, count down the list of boys until you reach the number circled in Column B. This is the boy you are to rate.

(4) Note: If this boy has not been a regular member of your class for at least two calendar months, please select the next boy on your class roll who has met this criteria.

(5) Write this boy's name on the Face Sheet of the male form.

(6) To determine the girl to rate, repeat steps 1, 2, 3, and 4, except that you substitute "girl" for "boy" and you underline the numbers. The underlined number in Column B becomes the girl to be rated.

(7) Write the girl's name on the Face Sheet of the female form.

Appendix A

Random Selection Sheets

Code No. 14

Column A Total Number of Boys (Girls) in Class	Column B Rank Number of Child to be rated
5	05
6	03
7	06
8	08
9	07
10	10
11	09
12	02
13	04
14	11
15	14
16	16
17	12
18	13
19	19
20	18
21	17
22	15
23	23
24	21
25	24
26	25
27	22
28	27
29	26
30	29
31	31
32	28
33	32
34	20
35	35
36	33
37	37
38	34
39	39
40	30
41	38
42	40
43	41
44	43
45	36

Appendix A

PITTSBURGH ADJUSTMENT SURVEY SCALE

STANDARDIZATION QUESTIONNAIRE

FOR MALES

Leave Blank		
Code No.		
	RS	SS
Agg.		
Pass. Agg.		
Withdr.		
Learn.		
T D		
Pro. Soc.		

Child's Name _____ _____ _____
Last, First Middle

Home Address _____ City _____ Zip _____

Tele. No. _____ Sex _____ Age _____

Date of Birth _____ Race _____
Month Day Year

Religion _____ Current Grade _____ Name of School _____

School System: (circle one) (1) City; (2) County; (3) Parochial; (4) Private

Child's Latest I. Q. _____ Grade I. Q. Obtained _____

I. Q. Test Name _____ _____ _____

Father's name _____ _____ _____
Last First Middle

Father's Occupation _____

Father's Highest Education Level (Check one)
- ___1. Sixth Grade
- ___2. Ninth Grade
- ___3. Twelfth Grade
- ___4. 2nd Year College
- ___5. 4th Year College
- ___6. Post Graduate

Father's Estimated Income (Check one)
- ___1. $3,000 or below
- ___2. $3,000–$5,000
- ___3. $5,000–$8,000
- ___4. $8,000–$15,000
- ___5. $15,000–$25,000
- ___6. $25,000 or above

Teacher's Name _____ Years of Experience (Prior to current year) _____

Date Questionnaire Filled Out _____

Note: On Items 1-6, read each statement and answer "yes" or "no".

(1) I would rate this pupil as one of the best adjusted I have known in my teaching career. YES_____ NO_____

(2) I would rate this pupil as one of the most seriously disturbed I have known in my teaching career. YES_____ NO_____

(3) I think this child should be referred for treatment for an emotional problem. YES_____ NO_____

(4) This child has been or will in the near future be referred for treatment for an emotional problem. YES_____ NO_____

(5) I think this child should be referred for special education for a learning disability. YES_____ NO_____

(6) This child has been or will in the near future be referred for special education for a learning disability. YES_____ NO_____

Note: On Items 7-11, please rate each child on a 9-point scale. Marker points are designated at odd numbers but feel free to place an X any where along the line between 1 & 9.

(7) How would you Personally rate this pupil's intellectual ability?

1	3	5	7	9
Much Below Average	Below Average	Average	Above Average	Much Above Average

(8) How would you rate this pupil's academic skills?

1	3	5	7	9
3 or more grades below age expectancy	1 or 2 grades below age expectancy	At grade level for age	1 or 2 grades above age expectancy	3 or more grades above age expectancy

(9) How would you rate this pupil's overall academic performance?

1	3	5	7	9
Much below intellectual capacity	Below intellectual capacity	Performs at expected level	Above intellectual capacity	Much above intellectual capactiy

(10) How would you rate this pupil's social and emotional adjustment?

1	3	5	7	9
Extremely Disturbed	Moderately Disturbed	Average Adjustment	Above Average Adjustment	Unusually Well Adjusted

(11) How would you rate this pupil's personal appeal?

1	3	5	7	9
Very Unlikable or Unappealing	Unlikable-Unappealing	Neutral - not Appealing Nor Unappealing	Likable-Appealing	Very Likable-Appealing

MODIFIED PITTSBURGH ADJUSTMENT SURVEY SCALES

Directions: Read EACH statement and decide if it describes the child selected for rating. If it does, check YES. If the statement does not describe the child, check NO.

Note: It is IMPORTANT that you check EACH statement. If you are in DOUBT, check the answer which is most true.

1. He is friendly ..... YES ☐ NO ☐
2. He tends to give up if he has something hard to finish ..... YES ☐ NO ☐
3. He interrupts whomever is speaking ..... YES ☐ NO ☐
4. Penmanship (handwriting) at least one grade level below age expectation ..... YES ☐ NO ☐
5. He starts fighting over nothing ..... YES ☐ NO ☐
6. He is a helpful child ..... YES ☐ NO ☐
7. He is alert in class ..... YES ☐ NO ☐
8. Poorly coordinated when doing things with his hands such as coloring or pencil work ..... YES ☐ NO ☐
9. Reading ability at least one grade level below age expectation ..... YES ☐ NO ☐
10. On the playground he just stands around ..... YES ☐ NO ☐
11. He acts up when I'm not watching ..... YES ☐ NO ☐
12. He volunteers to recite in class ..... YES ☐ NO ☐
13. He hits and pushes other children ..... YES ☐ NO ☐
14. His hands shake when he is called on to recite ..... YES ☐ NO ☐
15. He finds fault with what other children do ..... YES ☐ NO ☐
16. He approaches a difficult task with an air of defeatism ..... YES ☐ NO ☐
17. He is considerate of others ..... YES ☐ NO ☐
18. Fails to carry out tasks (Homework assignments, seat work, etc.) ..... YES ☐ NO ☐
19. He lacks the ambition to do well in school ..... YES ☐ NO ☐
20. He does things to get others angry ..... YES ☐ NO ☐
21. He will put up an argument when told he can't do something ..... YES ☐ NO ☐
22. He does his homework ..... YES ☐ NO ☐
23. He teases other children ..... YES ☐ NO ☐
24. He is afraid of making mistakes ..... YES ☐ NO ☐
25. He is bossy with other children ..... YES ☐ NO ☐
26. He is easily upset by changes in things around him ..... YES ☐ NO ☐
27. He is sure of himself ..... YES ☐ NO ☐
28. He uses abusive language toward other children ..... YES ☐ NO ☐
29. He has changeable moods ..... YES ☐ NO ☐
30. He gives in when another child insists on doing something another way ..... YES ☐ NO ☐
31. He does not respect other people's belongings ..... YES ☐ NO ☐
32. He does not forget things which anger him ..... YES ☐ NO ☐
33. He seems to be off in a world of his own ..... YES ☐ NO ☐
34. Any form of discipline makes him furious ..... YES ☐ NO ☐
35. He likes an audience all the time ..... YES ☐ NO ☐
36. Finds it hard to study ..... YES ☐ NO ☐
37. He has to have everything his own way ..... YES ☐ NO ☐
38. He works well by himself ..... YES ☐ NO ☐
39. When angry he will refuse to speak to anyone ..... YES ☐ NO ☐
40. His school performance is far below his capabilities ..... YES ☐ NO ☐
41. He has no friends ..... YES ☐ NO ☐
42. Behind at least one school grade due to academic difficulties ..... YES ☐ NO ☐
43. Seems dull; slow to catch on ..... YES ☐ NO ☐
44. He will not ask questions even when he doesn't know how to do the work ..... YES ☐ NO ☐
45. He fights back if another child has been asking for it ..... YES ☐ NO ☐

46. He never seems to be still for a moment ..... YES ☐ NO ☐

47. He argues with me ..... YES ☐ NO ☐

48. He is able to concentrate on things ..... YES ☐ NO ☐

49. He boasts about how tough he is ..... YES ☐ NO ☐

50. He seems to think that he's worthless ..... YES ☐ NO ☐

51. He tries to be the center of attention ..... YES ☐ NO ☐

52. He "drags his feet" when requested to do something ..... YES ☐ NO ☐

53. He accepts my suggestions ..... YES ☐ NO ☐

54. He sulks when things go wrong ..... YES ☐ NO ☐

55. He becomes frightened easily ..... YES ☐ NO ☐

56. He resents even the most gentle criticism of his work ..... YES ☐ NO ☐

57. Distractible; can't concentrate ..... YES ☐ NO ☐

58. He is able to see the bright side of things ..... YES ☐ NO ☐

59. He fights with smaller children ..... YES ☐ NO ☐

60. Spelling performance at least one grade level below age expectation ..... YES ☐ NO ☐

61. He is fearful of being hurt at play ..... YES ☐ NO ☐

62. He is stubborn ..... YES ☐ NO ☐

63. He never speaks up even when he has every right to be angry ..... YES ☐ NO ☐

64. He is interested in schoolwork ..... YES ☐ NO ☐

65. He tries to get other children into trouble ..... YES ☐ NO ☐

66. He does things just to attract attention ..... YES ☐ NO ☐

67. He never fights back even if someone hits him first .. YES ☐ NO ☐

68. He prefers to attach himself to an adult rather than play with children ..... YES ☐ NO ☐

69. He is popular with his classmates ..... YES ☐ NO ☐

70. He does things which are normal for children much younger than he ..... YES ☐ NO ☐

71. He never sticks up for himself when other children pick on him ..... YES ☐ NO ☐

72. He threatens to hurt other children when he is angry ..... YES ☐ NO ☐

73. Average or above I. Q. (Intelligence Quotient) ..... YES ☐ NO ☐

74. He does not take orders when other children are in charge ..... YES ☐ NO ☐

75. He prefers to be alone and play alone ..... YES ☐ NO ☐

76. He finishes his classroom assignments ..... YES ☐ NO ☐

77. He gives other children dirty looks ..... YES ☐ NO ☐

78. He deliberately interrupts what is going on by asking silly questions ..... YES ☐ NO ☐

79. He is slow in making friends ..... YES ☐ NO ☐

80. He seems as happy as most children ..... YES ☐ NO ☐

81. He finds fault with instructions given by adults ..... YES ☐ NO ☐

82. He seems unconcerned when he misbehaves ..... YES ☐ NO ☐

83. He cries easily ..... YES ☐ NO ☐

84. He is afraid of strange adults ..... YES ☐ NO ☐

85. He is self-confident ..... YES ☐ NO ☐

86. When angry he will do things like slamming the door or banging the desk ..... YES ☐ NO ☐

87. He acts in a "dare-devil", fearless manner ..... YES ☐ NO ☐

88. He has difficulty speaking clearly when he is excited or upset ..... YES ☐ NO ☐

89. He has a "chip on his shoulder" ..... YES ☐ NO ☐

90. He becomes embarrassed easily ..... YES ☐ NO ☐

91. Bright but doesn't apply self (Under Achiever) ..... YES ☐ NO ☐

92. He disturbs other children with his boisterous behavior ..... YES ☐ NO ☐

93. Behind at least two school grades due to academic difficulties ..... YES ☐ NO ☐

94. Arithmetic skill at least one grade level below age expectation ..... YES ☐ NO ☐

95. Much anxiety – Afraid of such things as storms, school, death, injury, war, (Considered phobic) ..... YES ☐ NO ☐

96. Frequent headaches, stomach aches or other non-specific physical complaints ..... YES ☐ NO ☐

Miller

A-7

Leave Blank

Code No. _____

	RS	SS
Agg.		
Pass. Agg.		
Withdr.		
Learn.		
T D		
Pro. Soc.		

Appendix A

PITTSBURGH ADJUSTMENT SURVEY SCALE

STANDARDIZATION QUESTIONNAIRE

FOR FEMALES

Child's Name _____ (Last, First, Middle)

Home Address _____ City _____ Zip _____

Tele. No. _____ Sex _____ Age _____

Date of Birth _____ (Month, Day, Year) Race _____

Religion _____ Current Grade _____ Name of School _____

School System: (circle one) (1) City; (2) County; (3) Parochial; (4) Private

Child's Latest I. Q. _____ Grade I. Q. Obtained _____

I. Q. Test Name _____

Father's name _____ (Last, First, Middle)

Father's Occupation _____

Father's Highest Education Level (Check one)

___1. Sixth Grade
___2. Ninth Grade
___3. Twelfth Grade
___4. 2nd Year College
___5. 4th Year College
___6. Post Graduate

Father's Estimated Income (Check one)

___1. $3,000 or below
___2. $3,000--$5,000
___3. $5,000--$8,000
___4. $8,000--$15,000
___5. $15,000--$25,000
___6. $25,000 or above

Teacher's Name _____ Years of Experience (Prior to current year) _____

Date Questionnaire Filled Out _____

Note: On Items 1-6, read each statement and answer "yes" or "no".

(1) I would rate this pupil as one of the best adjusted I have known in my teaching career. YES_____ NO_____

(2) I would rate this pupil as one of the most seriously disturbed I have known in my teaching career. YES_____ NO_____

(3) I think this child should be referred for treatment for an emotional problem. YES_____ NO_____

(4) This child has been or will in the near future be referred for treatment for an emotional problem. YES_____ NO_____

(5) I think this child should be referred for special education for a learning disability. YES_____ NO_____

(6) This child has been or will in the near future be referred for special education for a learning disability. YES_____ NO_____

Note: On Items 7-11, please rate each child on a 9-point scale. Marker points are designated at odd numbers but feel free to place an X any where along the line between 1 & 9.

(7) How would you Personally rate this pupil's intellectual ability?

1	3	5	7	9
Much Below Average	Below Average	Average	Above Average	Much Above Average

(8) How would you rate this pupil's academic skills?

1	3	5	7	9
3 or more grades below age expectancy	1 or 2 grades below age expectancy	At grade level for age	1 or 2 grades above age expectancy	3 or more grades above age expectancy

(9) How would you rate this pupil's overall academic performance?

1	3	5	7	9
Much below intellectual capacity	Below intellectual capacity	Performs at expected level	Above intellectual capacity	Much above intellectual capactiy

(10) How would you rate this pupil's social and emotional adjustment?

1	3	5	7	9
Extremely Disturbed	Moderately Disturbed	Average Adjustment	Above Average Adjustment	Unusually Well Adjusted

(11) How would you rate this pupil's personal appeal?

1	3	5	7	9
Very Unlikable or Unappealing	Unlikable-Unappealing	Neutral - not Appealing Nor Unappealing	Likable-Appealing	Very Likable-Appealing

MODIFIED PITTSBURGH ADJUSTMENT SURVEY SCALES

Directions: Read EACH statement and decide if it describes the child selected for rating. If it does, check YES. If the statement does not describe the child, check NO.

Note: It is IMPORTANT that you check EACH statement. If you are in DOUBT, check the answer which is most true.

1. She is friendly. ☐ YES ☐ NO
2. She tends to give up if she has something hard to finish ☐ YES ☐ NO
3. She interrupts whomever is speaking ☐ YES ☐ NO
4. Penmanship (handwriting) at least one grade level below age expectation ☐ YES ☐ NO
5. She starts fighting over nothing ☐ YES ☐ NO
6. She is a helpful child ☐ YES ☐ NO
7. She is alert in class ☐ YES ☐ NO
8. Poorly coordinated when doing things with her hands such as coloring or pencil work ☐ YES ☐ NO
9. Reading ability at least one grade level below age expectation ☐ YES ☐ NO
10. On the playground she just stands around ☐ YES ☐ NO
11. She acts up when I'm not watching ☐ YES ☐ NO
12. She volunteers to recite in class ☐ YES ☐ NO
13. She hits and pushes other children ☐ YES ☐ NO
14. Her hands shake when she is called on to recite ☐ YES ☐ NO
15. She finds fault with what other children do ☐ YES ☐ NO
16. She approaches a difficult task with an air of defeatism ☐ YES ☐ NO
17. She is considerate of others ☐ YES ☐ NO
18. Fails to carry out tasks (Homework assignments, seat work, etc.) ☐ YES ☐ NO
19. She lacks the ambition to do well in school ☐ YES ☐ NO
20. She does things to get others angry ☐ YES ☐ NO
21. She will put up an argument when told she can't do something. ☐ YES ☐ NO
22. She does her homework ☐ YES ☐ NO
23. She teases other children ☐ YES ☐ NO
24. She is afraid of making mistakes. ☐ YES ☐ NO
25. She is bossy with other children. ☐ YES ☐ NO
26. She is easily upset by changes in things around her ☐ YES ☐ NO
27. She is sure of herself. ☐ YES ☐ NO
28. She uses abusive language toward other children ☐ YES ☐ NO
29. She has changeable moods ☐ YES ☐ NO
30. She gives in when another child insists on doing something another way ☐ YES ☐ NO
31. She does not respect other people's belongings ☐ YES ☐ NO
32. She does not forget things which anger her ☐ YES ☐ NO
33. She seems to be off in a world of her own ☐ YES ☐ NO
34. Any form of discipline makes her furious ☐ YES ☐ NO
35. She likes an audience all the time. ☐ YES ☐ NO
36. Finds it hard to study. ☐ YES ☐ NO
37. She has to have everything her own way ☐ YES ☐ NO
38. She works well by herself ☐ YES ☐ NO
39. When angry she will refuse to speak to anyone. ☐ YES ☐ NO
40. Her school performance is far below her capabilities ☐ YES ☐ NO
41. She has no friends ☐ YES ☐ NO
42. Behind at least one school grade due to academic difficulties ☐ YES ☐ NO
43. Seems dull; slow to catch on ☐ YES ☐ NO
44. She will not ask questions even when she doesn't know how to do the work ☐ YES ☐ NO
45. She fights back if another child has been asking for it ☐ YES ☐ NO

46. She never seems to be still for a moment ..... YES ☐ NO ☐

47. She argues with me..... YES ☐ NO ☐

48. She is able to concentrate on things..... YES ☐ NO ☐

49. She boasts about how tough she is..... YES ☐ NO ☐

50. She seems to think that she's worthless ..... YES ☐ NO ☐

51. She tries to be the center of attention ..... YES ☐ NO ☐

52. She "drags her feet" when requested to do something ..... YES ☐ NO ☐

53. She accepts my suggestions ..... YES ☐ NO ☐

54. She sulks when things go wrong..... YES ☐ NO ☐

55. She becomes frightened easily..... YES ☐ NO ☐

56. She resents even the most gentle criticism of her work ..... YES ☐ NO ☐

57. Distractible; can't concentrate..... YES ☐ NO ☐

58. She is able to see the bright side of things ..... YES ☐ NO ☐

59. She fights with smaller children ..... YES ☐ NO ☐

60. Spelling performance at least one grade level below age expectation ..... YES ☐ NO ☐

61. She is fearful of being hurt at play..... YES ☐ NO ☐

62. She is stubborn ..... YES ☐ NO ☐

63. She never speaks up even when she has every right to be angry..... YES ☐ NO ☐

64. She is interested in schoolwork ..... YES ☐ NO ☐

65. She tries to get other children into trouble..... YES ☐ NO ☐

66. She does things just to attract attention..... YES ☐ NO ☐

67. She never fights back even if someone hits her first .. YES ☐ NO ☐

68. She prefers to attach herself to an adult rather than play with children ..... YES ☐ NO ☐

69. She is popular with her classmates ..... YES ☐ NO ☐

70. She does things which are normal for children much younger than her ..... YES ☐ NO ☐

71. She never sticks up for herself when other children pick on her..... YES ☐ NO ☐

72. She threatens to hurt other children when she is angry ..... YES ☐ NO ☐

73. Average or above I. Q. (Intelligence Quotient)..... YES ☐ NO ☐

74. She does not take orders when other children are in charge..... YES ☐ NO ☐

75. She prefers to be alone and play alone..... YES ☐ NO ☐

76. She finishes her classroom assignments..... YES ☐ NO ☐

77. She gives other children dirty looks ..... YES ☐ NO ☐

78. She deliberately interrupts what is going on by asking silly questions ..... YES ☐ NO ☐

79. She is slow in making friends ..... YES ☐ NO ☐

80. She seems as happy as most children ..... YES ☐ NO ☐

81. She finds fault with instructions given by adults .... YES ☐ NO ☐

82. She seems unconcerned when she misbehaves ..... YES ☐ NO ☐

83. She cries easily ..... YES ☐ NO ☐

84. She is afraid of strange adults..... YES ☐ NO ☐

85. She is self-confident ..... YES ☐ NO ☐

86. When angry she will do things like slamming the door or banging the desk ..... YES ☐ NO ☐

87. She acts in a "dare-devil", fearless manner..... YES ☐ NO ☐

88. She has difficulty speaking clearly when she is excited or upset ..... YES ☐ NO ☐

89. She has a "chip on her shoulder"..... YES ☐ NO ☐

90. She becomes embarrassed easily..... YES ☐ NO ☐

91. Bright but doesn't apply self (Under Achiever) ..... YES ☐ NO ☐

92. She disturbs other children with her boisterous behavior..... YES ☐ NO ☐

93. Behind at least two school grades due to academic difficulties ..... YES ☐ NO ☐

94. Arithmetic skill at least one grade level below age expectation ..... YES ☐ NO ☐

95. Much anxiety – Afraid of such things as storms, school, death, injury, war, (Considered phobic)..... YES ☐ NO ☐

96. Frequent headaches, stomach aches or other non-specific physical complaints..... YES ☐ NO ☐

Appendix B

SBCL Contradictions

A contradiction occurs under the following circumstances:

1. If "yes" for statement #1 and #41 or 75
2. If "yes" for statement #5 and #30, 63, 67, or 71
3. If "yes" for statement #6 and #52
4. If "yes" for statement #7 and #33
5. If "yes" for statement #17 and #3, 37, 78 or 92
6. If "yes" for statement #18 and #22, or 76
7. If "yes" for statement #19 and #64
8. If "yes" for statement #27 and #16, 24, 50
9. If "yes" for statement #43 and #73 or 91
10. If "yes" for statement #53 and #47, 56 or 81
11. If "yes" for statement #57 and #48

Note: Mean number of contradictions equal .96 and standard deviation 1.08. By arbitrary decision, protocols with three or more contradictions were considered unreliable and were excluded in the SBCL Standardization Study.

APPENDIX C
PASS VARIMAX ROTATED LOADINGS COMPARING
MILLER VS ROSS FOR MALE, FEMALE, AND TOTAL
FOR ROTATIONS OF 4, 5, & 6 FACTORS

Factor name			AGGRESSION								
# Rotated			4			5			6		
Item #	Freq*	Ross	M	F	T	M	F	T	M	F	T
3	15	60	53	57	55	54	57	56	53	40	55
5	6	56	70	64	-	70	63	-	70	65	68
11	23	66	52	60	55	52	60	56	52	49	56
13	12	71	64	65	65	64	64	65	64	61	65
15	12	70	60	61	61	61	61	61	60	57	61
20	7	65	70	68	70	70	69	69	70	67	69
21	9	66	66	61	64	66	62	65	66	61	65
23	13	75	58	60	60	58	59	60	58	52	59
25	13	62	65	64	63	66	65	64	65	56	63
28	4	51	61	54	58	61	53	57	61	55	58
31	17	61	37	-	35	37	-	34	35	-	31
35	12	67	58	62	61	59	63	62	58	46	61
45	49	51	35	36	37	36	37	38	36	34	38
46	16	61	45	41	44	45	40	45	44	-	43
47	6	56	63	52	60	63	53	60	64	54	60
49	4	64	57	52	56	58	52	56	58	53	56
51	12	69	65	64	66	66	64	67	65	48	66
59	4	62	60	54	59	60	53	58	60	55	58
65	8	77	67	69	67	67	66	67	66	62	67
66	13	77	63	71	67	64	71	68	63	56	67
72	8	70	64	61	69	63	60	67	63	63	63
74	23	44	33	-	32	33	-	30	31	-	-
78	6	54	55	48	53	55	48	54	54	37	53
87	8	64	57	55	57	57	55	58	57	48	57
92	9	73	64	64	65	65	64	66	64	52	65

*Total population with 6 factors rotated

NEW ITEMS

17	84		-62	-60	-62	-62	-59	-62	-62	-55	-61
29	26		47	40	44	49	40	44	48	41	44
30	57		-36	-	-32	-36	-	-33	-36	-	-33
34	4		60	54	57	59	54	56	60	62	57
37	6		70	66	68	70	66	67	70	64	68
39	8		43	43	42	42	42	41	43	52	42
52	10		-	-	-	-	-	-	-	32	-
53	90		-48	-31	-41	-47	-31	-41	-47	-34	-41
54	16		56	51	54	56	51	53	57	56	54
56	6		51	43	47	50	43	46	51	51	47
62	16		63	56	60	63	56	59	64	60	60
77	12		64	60	61	63	60	60	63	63	61
81	5		57	47	54	56	47	53	57	52	54
82	19		48	42	46	47	42	46	47	37	46
86	7		63	58	61	62	58	60	63	61	61
89	7		64	60	63	64	60	61	64	68	62

APPENDIX C
PASS VARIMAX ROTATED LOADINGS COMPARING
MILLER VS ROSS FOR MALE, FEMALE, AND TOTAL
FOR ROTATIONS OF 4, 5, & 6 FACTORS

Factor name			PRO-SOCIAL								
# Rotated			4			5			6		
Item #	Freq.*	Ross	M	F	T	M	F	T	M	F	T
2	32	50	69	62	66	68	60	65	68	61	66
6	81	-54	-43	-49	-48	-47	-50	-50	-50	-51	-50
7	68	-72	-71	-69	-67	-71	-66	-70	-73	-68	-71
12	70	-73	-41	-44	-43	-44	-44	-45	-47	-45	-45
16	20	52	55	53	53	53	51	53	55	53	54
17	84	-44	-35	-31	-35	-36	-32	-35	-37	-32	-36
19	21	62	72	71	73	73	71	73	74	72	74
22	78	-64	-65	-64	-66	-66	-65	-66	-67	-65	-67
27	51	-55	-48	-37	-42	-46	-35	-42	-47	-37	-43
33	21	57	52	57	56	55	57	57	57	58	57
38	73	-66	-69	-62	-66	-68	-61	-66	-67	-62	-66
44	31	43	41	40	41	43	42	43	45	43	44
48	74	-73	-72	-70	-71	-71	-69	-71	-70	-71	-71
53	90	-52	-32	-43	-38	-35	-42	-38	-37	-42	-38
58	88	-50	-31	-41	-36	-35	-40	-38	-40	-41	-38
64	82	-78	-71	-70	-72	-73	-69	-73	-75	-70	-73
69	79	-63	-34	-42	-39	-39	-43	-41	-42	-44	-41
76	75	-70	-75	-73	-75	-76	-72	-75	-77	-73	-76
80	84	-50	-	-40	-31	-	-39	-33	-31	-40	-33
85	60	-59	-45	-41	-42	-45	-39	-43	-46	-41	-44
NEW ITEMS											
4	26		38	-	34	36	-	34	35	-	35
8	18		40	35	39	40	35	39	39	36	40
9	33		41	-	33	36	-	33	36	-	34
11	23		39	-	33	37	-	32	35	-	33
18	23		75	75	76	75	75	76	76	76	77
36	31		77	71	74	75	69	73	74	71	74
40	16		54	49	53	54	49	53	54	50	53
42	26		34	-	-	30	-	-	-	-	-
43	24		52	47	48	50	45	48	51	47	50
52	10		44	47	46	47	46	47	49	47	47
57	26		76	71	73	74	69	73	73	71	73
60	26		44	32	37	39	30	37	39	32	38
66	13		33	-	-	31	-	-	-	-	-
70	15		41	35	38	40	34	38	39	36	39
73	68		-33	-	-	-30	-	-	-30	-	-30
79	25		-	34	-	-	34	31	32	35	32
82	19		44	38	43	45	38	43	45	39	43
91	17		40	39	40	40	39	40	38	39	40
92	9		30	-	-	-	-	-	-	-	-
94	29		44	33	37	40	31	37	40	33	38

*Total population with 6 factors rotated

APPENDIX C

PASS VARIMAX ROTATED LOADINGS COMPARING MILLER VS ROSS FOR MALE, FEMALE, AND TOTAL FOR ROTATIONS OF 4, 5, & 6 FACTORS

Factor name			WITHDRAWAL								
# Rotated			4			5			6		
Item #	Freq.*	Ross	M	F	T	M	F	T	M	F	T
10	6	55	47	41	45	31	39	35	33	34	34
14	5	56	33	47	39	42	46	44	42	50	46
24	26	54	50	53	52	61	55	60	61	61	61
26	15	59	52	57	54	61	60	62	61	64	63
30	57	52	-	-	-	-	-	-	-	-	-
41	6	42	-	-	-	-	-	-	-	-	-
50	6	51	41	44	43	36	44	39	36	38	36
55	15	57	61	61	60	69	61	66	70	68	69
61	5	56	53	46	48	45	45	46	49	46	47
63	24	57	34	38	36	-	-	-	-	-	-
67	22	51	-	-	-	-	-	-	-	-	-
68	6	44	39	-	34	34	-	32	35	31	34
70	15	41	-	-	-	-	-	=	-	-	-
71	20	56	-	-	-	-	-	-	-	-	-
75	7	48	57	44	51	38	40	37	40	32	35
79	25	54	58	55	58	40	53	47	42	46	44
84	69	64	51	57	54	54	57	56	54	58	56
88	24	40	39	43	39	49	42	44	49	46	47
90	35	52	48	55	51	56	56	56	56	60	57

*Total population with 6 factors rotated

NEW ITEMS

1	92		-43	-38	-42	-	-35	-	-	-	-
12	70		-31	-35	-34	-	-34	-	-	-	-
16	20		32	31	32	33	35	35	33	34	33
27	51		-39	-49	-44	-42	-50	-47	-42	-51	-46
33	21		39	34	37	-	34	30	-	30	-
39	8		32	32	35	-	38	32	-	-	-
44	31		34	36	36	-	30	-	-	-	-
56	6		35	30	34	-	35	31	-	-	-
58	88		-39	-34	-38	-	-35	-	-	-	-
69	79		-43	-41	-43	-	-39	-30	-	-30	-
74	23		-	-	-	-	-	-	-	-	-
80	84		-48	-45	-48	-	-45	-36	-	-33	-31
83	12		45	51	48	52	54	56	53	59	57
85	60		-46	-50	-48	-43	-51	-48	-43	-50	-47
95	5		43	50	47	50	49	50	51	52	52
96	7		28	34	33	30	36	35	30	37	35

APPENDIX C
PASS VARIMAX ROTATED LOADINGS COMPARING MILLER VS ROSS FOR MALE, FEMALE, AND TOTAL FOR ROTATIONS OF 4, 5, & 6 FACTORS

Factor name		LEARNING DISABILITY								
# Rotated		4			5			6		
Item #	Freq.*	M	F	T	M	F	T	M	F	T
4	26	-	44	37	-	45	37	30	43	36
8	18	-	-	-	-	-	-	-	-	-
9	33	69	75	75	73	77	75	73	78	75
18	23	-	-	-	-	-	-	-	-	-
27	51	-	-	-	--	-32	-	-	-	-
36	31	-	35	-	--	37	-	-	33	-
40	16	-	-	-	-	-	-	-	-	-
42	26	69	75	75	72	77	75	73	79	75
43	24	55	58	57	57	60	57	57	60	57
48	74	-	-31	-	-	-33	-	-	-	-
57	26	-	30	-	-	32	-	-	-	-
60	26	65	71	70	68	73	71	69	74	70
70	15	-	34	-	-	35	-	-	33	-
73	68	-58	-56	-59	-60	-57	-59	-60	-59	-60
91	17	-	-	-	-	-	-	-	-	-
93	11	60	60	63	62	61	62	62	64	63
94	29	64	69	68	67	70	68	67	71	68

*Total population with 6 factors rotated

Appendix D

T Score Equivalents of Raw Scores for Male, Female, and Total Populations

I. Low Need Achievement

Raw Score	Male	Female	Total
0	40	42	41
1	41	43	42
2	43	45	44
3	44	46	45
4	45	48	46
5	46	49	48
6	48	51	49
7	49	52	51
8	50	54	52
9	52	55	53
10	53	57	55
11	54	58	56
12	55	60	58
13	57	62	59
14	58	63	60
15	59	65	62
16	61	66	63
17	62	68	64
18	63	69	66
19	65	71	67
20	66	72	69
21	67	74	70
22	68	75	71
23	70	77	73
24	71	78	74
25	72	80	75
26	74	81	77
27	75	83	78
28	76	84	80

II. Aggression

Raw Score	Male	Female	Total
0	43	44	44
1	44	46	45
2	45	48	47
3	47	50	48
4	48	52	50
5	50	54	51
6	51	55	53
7	52	57	54
8	54	59	56
9	55	61	57
10	56	63	59
11	58	65	61
12	59	67	62
13	61	68	64
14	62	70	65
15	63	72	67
16	65	74	68
17	66	76	70
18	67	78	71
19	69	80	73
20	70	82	74
21	72	83	76
22	73	85	78
23	74	87	79
24	76	89	81
25	77	91	82
26	78	93	84
27	80	95	85
28	81	96	87
29	82	98	88
30	84	100	90
31	85	102	91
32	87	104	93
33	88	106	95
34	89	108	96
35	91	109	98
36	92	111	99

Appendix D

III. Anxiety

Raw Score	Male	Female	Total
0	41	41	41
1	44	44	44
2	47	47	47
3	50	50	50
4	53	53	53
5	56	56	56
6	60	59	59
7	63	62	62
8	66	65	65
9	69	68	69
10	72	71	72
11	75	74	75
12	79	77	78
13	82	80	81
14	85	83	84
15	88	86	87
16	91	89	90
17	94	92	93
18	98	95	96

IV. Academic Disability

Raw Score	Male	Female	Total
0	41	43	42
1	45	47	46
2	48	51	50
3	52	55	54
4	56	59	57
5	60	63	61
6	63	68	65
7	67	72	69
8	71	76	73

V. Hostile Isolation

Raw Score	Male	Female	Total
0	41	42	42
1	48	48	48
2	54	55	55
3	61	61	61
4	68	68	68
5	74	74	74
6	81	81	81
7	87	88	88

VI. Extraversion

Raw Score	Male	Female	Total
0	8	3	6
1	14	10	12
2	19	17	18
3	25	23	25
4	31	30	31
5	37	37	37
6	43	44	43
7	49	51	50
8	55	58	56
9	61	65	62
10	66	71	69
11	72	78	75
12	78	85	81

VII. Total Disability Score

Raw Score	Male	Female	Total
0	38	40	39
1	39	41	40
2	40	41	41
3	40	42	41
4	41	43	42
5	42	44	43
6	42	44	43
7	43	45	44
8	43	46	45
9	44	47	45
10	45	47	46
11	45	48	47
12	46	49	47
13	47	50	48
14	47	50	49
15	48	51	49
16	48	52	50
17	49	53	51
18	50	53	51
19	50	54	52
20	51	55	53
21	52	56	53
22	52	56	54
23	53	57	55
24	53	58	55
25	54	59	56
26	55	59	57
27	55	60	57

Appendix D

VII. Total Disability Score (continued)

Raw Score	Male	Female	Total	Raw Score	Male	Female	Total
28	56	61	58	62	77	87	81
29	57	62	59	63	78	87	82
30	57	62	59	64	78	88	82
31	58	63	60	65	79	89	83
32	58	64	61	66	80	90	84
33	59	65	61	67	80	90	84
34	60	65	62	68	81	91	85
35	60	66	63	69	82	92	86
36	61	67	63	70	82	93	86
37	62	68	64	71	83	93	87
38	62	68	65	72	83	94	88
39	63	69	65	73	84	95	88
40	63	70	66	74	85	96	89
41	64	71	67	75	85	96	90
42	65	71	67	76	86	97	90
43	65	72	68	77	87	98	91
44	66	73	69	78	87	99	92
45	67	74	70	79	88	99	92
46	67	74	70	80	88	100	93
47	68	75	71	81	89	101	94
48	68	76	72	82	90	102	94
49	69	77	72	83	90	102	95
50	70	77	73	84	91	103	96
51	70	78	74	85	92	104	96
52	71	79	74	86	92	105	97
53	72	80	75	87	93	105	98
54	72	81	76	88	93	106	98
55	73	81	76	89	94	107	99
56	73	82	77	90	95	108	100
57	74	83	78	91	95	108	100
58	75	84	78	92	96	109	101
59	75	84	79	93	97	110	102
60	76	85	80	94	97	111	102
61	77	86	80	95	98	111	103

Appendix E

Accumulative Percentage per T Score for Each SBCL Scale

I. Male

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	05	00
31	00	00	00	00	00	05	00
32	00	00	00	00	00	05	00
33	00	00	00	00	00	05	00
34	00	00	00	00	00	05	00
35	00	00	00	00	00	05	00
36	00	00	00	00	00	10	00
37	00	00	00	00	00	10	00
38	00	00	00	00	00	10	06
39	17	00	27	00	00	10	11
40	17	00	27	00	41	10	20
41	28	00	27	37	41	10	24
42	36	20	27	37	41	21	32
43	36	20	43	37	41	21	35
44	43	43	43	55	41	21	38
45	49	54	43	55	41	21	43
46	54	54	56	55	41	21	46
47	54	61	56	55	65	21	51
48	57	66	56	63	65	73	54
49	60	66	67	63	65	73	58
50	63	71	67	63	65	73	60
51	63	74	67	63	65	73	64
52	66	74	76	68	65	73	66
53	68	76	76	68	80	73	69
54	68	78	76	68	80	73	71
55	70	78	82	68	80	84	73
56	72	81	82	74	80	84	75
57	75	81	82	74	80	84	77
58	75	82	86	74	80	84	79
59	77	84	86	74	80	84	81
60	79	84	86	81	90	84	83
61	79	86	90	81	90	90	85
62	81	87	90	81	90	90	85
63	83	87	90	81	90	90	87
64	86	89	93	88	90	90	88
65	86	90	93	88	90	90	90
66	88	90	93	88	95	90	91
67	90	91	95	88	95	94	92
68	92	92	95	94	95	94	92
69	92	92	95	94	95	94	93
70	99	99	99	99	99	99	99

Appendix E

II. Female

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	06	00
31	00	00	00	00	00	06	00
32	00	00	00	00	00	06	00
33	00	00	00	00	00	06	00
34	00	00	00	00	00	06	00
35	00	00	00	00	00	06	00
36	00	00	00	00	00	10	00
37	00	00	00	00	00	10	00
38	00	00	00	00	00	10	11
39	25	00	31	00	00	10	17
40	25	00	31	00	43	10	31
41	40	00	31	52	43	10	36
42	49	35	31	52	43	23	45
43	49	35	46	52	43	23	48
44	57	59	46	67	43	23	51
45	62	70	46	67	43	23	58
46	67	70	57	67	43	23	61
47	67	76	57	67	66	23	66
48	71	80	57	74	66	83	68
49	73	80	66	74	66	83	71
50	76	84	66	74	66	83	73
51	76	86	66	74	66	83	76
52	78	86	74	78	66	83	78
53	80	88	74	78	80	83	81
54	80	89	74	78	80	83	82
55	82	89	80	78	80	93	85
56	84	91	80	82	80	93	86
57	85	91	80	82	80	93	88
58	85	92	85	82	80	93	88
59	87	93	85	82	80	93	90
60	89	93	85	87	90	93	90
61	89	93	89	87	90	95	92
62	90	94	89	87	90	95	93
63	92	94	89	87	90	95	93
64	93	95	92	92	90	95	94
65	93	95	92	92	90	95	95
66	94	95	92	92	96	95	96
67	95	96	94	92	96	98	96
68	96	97	94	97	96	98	97
69	96	97	94	97	96	98	97
70	99	99	99	99	99	99	99

Appendix E

III. Best Adjusted from Total Population

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	01	00
31	00	00	00	00	00	01	00
32	00	00	00	00	00	01	00
33	00	00	00	00	00	01	00
34	00	00	00	00	00	01	00
35	00	00	00	00	00	01	00
36	00	00	00	00	00	01	00
37	00	00	00	00	00	01	00
38	00	00	00	00	00	01	21
39	47	00	51	00	00	01	33
40	47	00	51	00	54	01	54
41	69	00	51	71	54	01	63
42	79	39	51	71	54	08	74
43	79	39	73	71	54	08	78
44	86	69	73	89	54	08	81
45	90	82	73	89	54	08	86
46	93	82	83	89	54	08	89
47	93	87	83	89	74	08	92
48	94	90	83	93	74	85	94
49	96	90	89	93	74	85	95
50	97	93	89	93	74	85	96
51	97	95	89	93	74	85	98
52	97	95	93	95	74	85	98
53	98	96	93	95	84	85	99
54	98	96	93	95	84	85	99
55	98	96	96	95	84	94	99
56	99	97	96	96	84	94	99
57	99	97	96	96	84	94	99
58	99	97	98	96	84	94	99
59	99	98	98	96	84	94	99
60	99	98	98	98	92	94	99
61	99	99	99	98	92	97	99
62	99	99	99	98	92	97	99
63	99	99	99	98	92	97	99
64	99	99	99	98	92	97	99
65	99	99	99	98	92	97	99
66	99	99	99	98	96	97	99
67	99	99	99	98	96	99	99
68	99	99	99	99	96	99	99
69	99	99	99	99	96	99	99
70	99	99	99	99	99	99	99

Appendix E

IV. Moderately Adjusted from Total Population

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	07	00
31	00	00	00	00	00	07	00
32	00	00	00	00	00	07	00
33	00	00	00	00	00	07	00
34	00	00	00	00	00	07	00
35	00	00	00	00	00	07	00
36	00	00	00	00	00	13	00
37	00	00	00	00	00	13	00
38	00	00	00	00	00	13	04
39	11	00	20	00	00	13	07
40	11	00	20	00	39	13	14
41	21	00	20	35	39	13	17
42	29	24	20	35	39	26	25
43	29	24	34	35	39	26	28
44	37	45	34	52	39	26	31
45	43	56	34	52	39	26	37
46	49	56	47	52	39	26	40
47	49	63	47	52	63	26	46
48	53	68	47	60	63	76	49
49	57	68	59	60	63	76	54
50	60	73	59	60	63	76	57
51	60	76	59	60	63	76	61
52	64	76	68	66	63	76	64
53	67	79	68	66	79	76	68
54	67	81	68	66	79	76	70
55	69	81	76	66	79	86	73
56	72	83	76	73	79	86	75
57	75	83	76	73	79	86	78
58	75	85	82	73	79	86	80
59	77	86	82	73	79	86	83
60	80	86	82	80	90	86	84
61	80	88	87	80	90	91	86
62	82	89	87	80	90	91	87
63	85	89	87	80	90	91	89
64	87	91	91	88	90	91	90
65	87	92	91	88	90	91	92
66	89	92	91	88	96	91	93
67	92	93	94	88	96	95	94
68	94	94	94	94	96	95	95
69	94	94	94	94	96	95	96
70	99	99	99	99	99	99	99

Appendix E

V. Most Disturbed from Total Population

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	28	00
31	00	00	00	00	00	28	00
32	00	00	00	00	00	28	00
33	00	00	00	00	00	28	00
34	00	00	00	00	00	28	00
35	00	00	00	00	00	28	00
36	00	00	00	00	00	41	00
37	00	00	00	00	00	41	00
38	00	00	00	00	00	41	00
39	01	00	03	00	00	41	00
40	01	00	03	00	09	41	01
41	01	00	03	05	09	41	01
42	01	02	03	05	09	55	01
43	01	02	07	05	09	55	01
44	01	09	07	09	09	55	01
45	04	12	07	09	09	55	01
46	04	12	13	09	09	55	01
47	04	15	13	09	23	55	01
48	04	19	13	11	23	69	01
49	04	19	23	11	23	69	01
50	06	21	23	11	23	69	01
51	06	24	23	11	23	69	02
52	07	24	34	16	23	69	02
53	08	26	34	16	49	69	03
54	08	27	34	16	49	69	03
55	10	27	38	16	49	80	04
56	11	32	38	23	49	80	05
57	15	32	38	23	49	80	09
58	15	35	49	23	49	80	11
59	16	38	49	23	49	80	13
60	20	38	49	33	72	80	14
61	20	41	57	33	72	91	16
62	23	44	57	33	72	91	17
63	24	44	57	33	72	91	20
64	28	45	63	48	72	91	21
65	28	50	63	48	72	91	26
66	33	50	63	48	89	91	28
67	40	51	71	48	89	96	31
68	48	53	71	72	89	96	33
69	48	53	71	72	89	96	39
70	99	99	99	99	99	99	99

Appendix E

VI. Referred for Emotional Problem from Total Population

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	27	00
31	00	00	00	00	00	27	00
32	00	00	00	00	00	27	00
33	00	00	00	00	00	27	00
34	00	00	00	00	00	27	00
35	00	00	00	00	00	27	00
36	00	00	00	00	00	38	00
37	00	00	00	00	00	38	00
38	00	00	00	00	00	38	00
39	00	00	02	00	00	38	00
40	00	00	02	00	14	38	00
41	01	00	02	06	14	38	00
42	02	04	02	06	14	55	00
43	02	04	07	06	14	55	01
44	04	12	07	14	14	55	01
45	06	17	07	14	14	55	01
46	07	17	13	14	14	55	01
47	07	20	13	14	33	55	03
48	08	25	13	19	33	70	03
49	09	25	22	19	33	70	04
50	11	29	22	19	33	70	04
51	11	34	22	19	33	70	06
52	12	34	34	24	33	70	08
53	14	37	34	24	57	70	08
54	14	40	34	24	57	70	09
55	17	40	40	24	57	81	10
56	19	43	40	35	57	81	12
57	22	43	40	35	57	81	17
58	22	46	50	35	57	81	19
59	25	48	50	35	57	81	23
60	29	48	50	45	79	81	26
61	29	50	58	45	79	88	29
62	33	53	58	45	79	88	31
63	36	53	58	45	79	88	35
64	41	55	66	58	79	88	38
65	41	58	66	58	79	88	43
66	47	58	66	58	92	88	45
67	54	60	74	58	92	93	49
68	59	61	74	78'	92	93	52
69	59	61	74	78	92	93	56
70	99	99	99	99	99	99	99

Appendix E

VII. Referred for Special Education from Total Population

T Score	LNA	Agg	Anx	AD	HI	Ext	TDS
30	00	00	00	00	00	19	00
31	00	00	00	00	00	19	00
32	00	00	00	00	00	19	00
33	00	00	00	00	00	19	00
34	00	00	00	00	00	19	00
35	00	00	00	00	00	19	00
36	00	00	00	00	00	27	00
37	00	00	00	00	00	27	00
38	00	00	00	00	00	27	00
39	01	00	04	00	00	27	00
40	01	00	04	00	23	27	00
41	03	00	04	01	23	27	00
42	04	15	04	01	23	44	01
43	04	15	11	01	23	44	01
44	06	28	11	03	23	44	02
45	09	38	11	03	23	44	04
46	11	38	22	03	23	44	05
47	11	44	22	03	46	44	07
48	13	52	22	05	46	74	09
49	15	52	32	05	46	74	10
50	17	56	32	05	46	74	13
51	17	59	32	05	46	74	16
52	20	59	44	07	46	74	18
53	22	62	44	07	66	74	22
54	22	65	44	07	66	74	24
55	25	65	54	07	66	85	29
56	28	67	54	13	66	85	31
57	31	67	54	13	66	85	36
58	31	71	63	13	66	85	38
59	34	74	63	13	66	85	45
60	39	74	63	22	82	85	46
61	39	76	73	22	82	92	52
62	43	76	73	22	82	92	54
63	47	76	73	22	82	92	60
64	54	78	79	39	82	92	62
65	54	80	79	39	82	92	66
66	61	80	79	39	94	92	69
67	67	82	84	39	94	95	72
68	74	83	84	66	94	95	75
69	74	83	84	66	94	95	77
70	99	99	99	99	99	99	99

PROCESSING CONTROL RECORD

for

MUST and MUST - EXPEDITE DOCUMENTS 37-7

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